

# mmiR

MILITARY MINIATURES in REVIEW

The Mighty Antar:  
When ugly is a good thing

no.

# 54



My Hercules! Photo  
report on the M88A2

Plowin' and Blitzen:  
Scooping up the updates  
for Tamiya's Opel Blitz

Postcard from Italy:  
M.T.S.M.A. torpedo boat

One BT just for me:  
The Russian offering  
from Mr. T

Wunder-Zunder:  
Great Wall Hobby's  
Zundapp KS750



# Pumped-up Panzer!

Messing up Tasca's  
1:24 Panzer II F



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02 >



SHORT TAKES • MINI MEN • COOL STUFF GALORE





## C O N T E N T S

### My Hercules! ..... 24

*A photo report on the M88A2.*

### Plowin' and Blitzen ..... 28

*Scooping up a bunch of updates for Tamiya's Opel Blitz.*

### The Mighty Antar ..... 34

*When ugly is a good thing: Accurate Armour's big and nasty tank transporter.*

### One BT just for me ..... 52

*The Russian offering from Mr. T.*

### M.T.S.M.A. .... 60

*The Royal Italian Navy torpedo boat gets wet in a diorama.*

### Mini-Pakwagen ..... 72

*Converting Tamiya's diminutive 1:48 Sd.Kfz 251/  
Ausf. D into the heavy-duty pakwagen.*

### Wunder-Zunder ..... 58

*Great Wall Hobby's Zundapp KS750.*

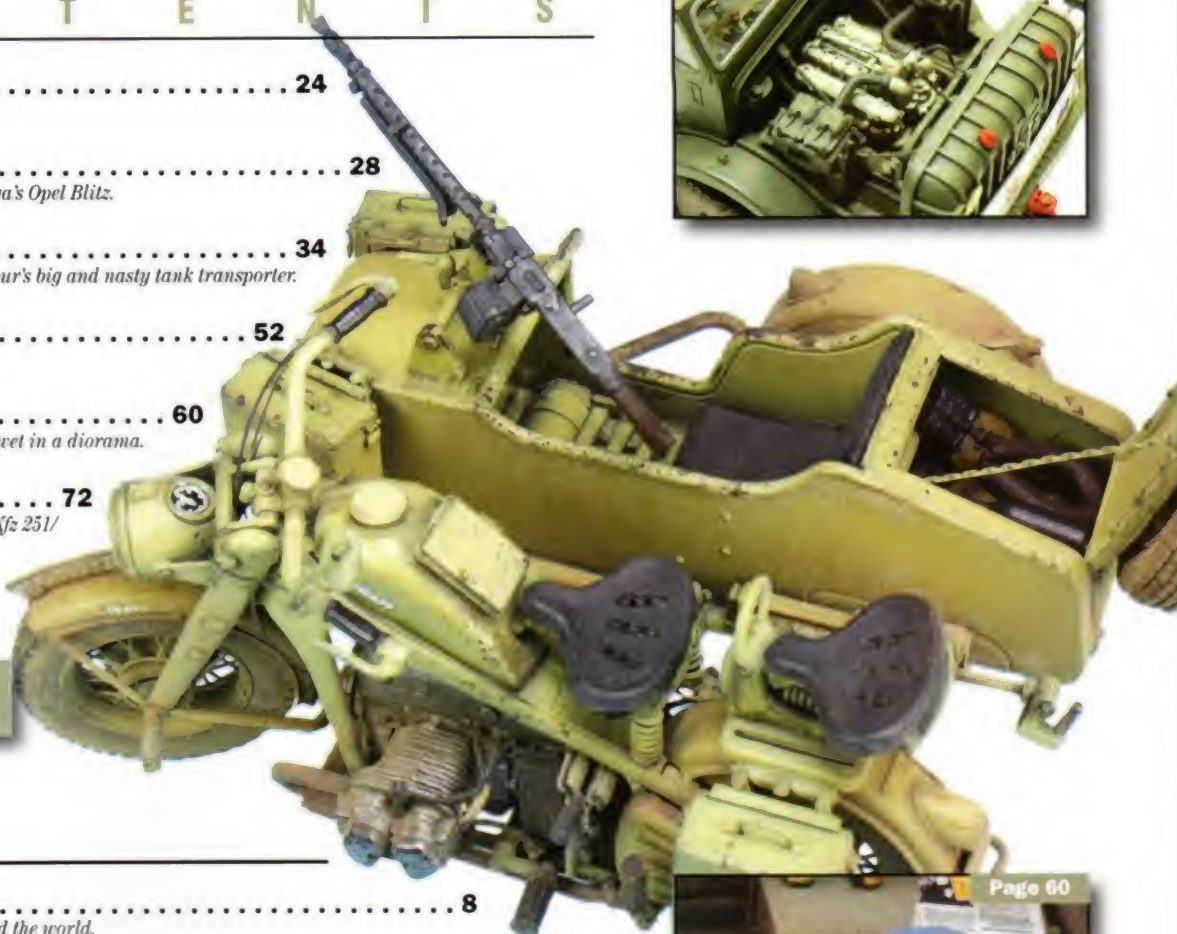
## Features

### Short Takes ..... 8

*Our look at all the latest dope from around the world.*

### Mini-Men ..... 66

*The usual peek at what's new on the figure front.*



## ON THE COVER:

It's a new scale and a whole new way of life with Tasca's 1/24th scale Panzer II. See for yourself if this emerging medium is for you. Tom Jett makes a go of it with a little help from Aber and a healthy dose of Mig Pigments, Archer and a worn-out white wash. Look for the whole sordid story on page 44.







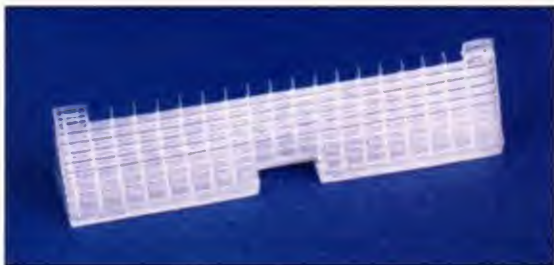
## From Your Editor

Remember that Wendy's commercial back in the eighties? An old woman, distressed at the scanty nature of a competitor's hamburger shouts: "Where's the Beef?" This was to become quite a pop culture phenomenon, with t-shirts, bumper stickers and buttons.

I would like to propose a similar question: "Where's the building?" Over the last several years, the

exploration of weathering techniques has practically exploded. In fact, it has become an industry all by itself. *Mig Productions* started it all with their line of weathering powders. This was to eventually grow to a huge array of powders, paints, filters and washes. *AK Interactive* is another expansive line and there are not many companies that have not gotten into the act in some respect. Vallejo was an early entrant in this area and even industry giant *Tamiya* now has a line of powders and washes.

All this marketing effort was bound to have a noticeable effect on the modeling public. Much of what is seen on Internet blogs and forums now focuses on finishing techniques. Articles in the print media also center mostly on painting and weathering. We here at MMiR are no exception. It does appear to be what people want to see. What troubles me is that the art of building may be getting lost in a flurry of fancy finishes. I frequently see articles where the modelers spend very little time on the actual construction of the models, jumping right ahead to the painting a finishing. I have no objection to this; the author is certainly entitled to his own experience. After poring over much of what goes on in the industry, I find that there is the cumulative impression that building is gradually taking a back seat to finishing.



Perhaps part of this is that novice modelers now have much more to work with than in years past. I recall my first experience with weathering. Having digested all of the Shep Paine diorama sheets, I spray-painted the Tamiya M113 with a can of Pactra olive drab and then dry brushed it with tan. I thought I had died and gone to heaven. A big part of this was my delight at spray-painting for the first time, but nothing makes a model pop like a nice frosting of tan paint!

Thanks to the above-mentioned marketing, there is a bewildering array of products that create effects that were previously only to be discovered through trial and error. Technology has also enhanced this, with a plethora of instructional DVDs.

Another interesting aspect to this popularity is the practice of personal demonstration. Miguel Jimenez, possibly the hardest working guy in the hobby, has been hitting the streets for years to hawk his various lines. One-on-one promotion was almost non-existent in our little world prior to the start of *Mig Productions*. Mr. Jimenez now represents the *AK Interactive* line of products and this dude crisscrosses the globe doing demonstrations. This type of interaction has a powerful influence on buying (it doesn't hurt that he's a real nice guy, either).

My main complaint is that I think that the model is sometimes lost in all that product. Looking at the results of a weathering contest recently, I wondered where the model went. I like the idea of very realistic finishes. Armored vehicles do get really dirty. But we do have control over how much "reality" that we put into our models. A model can still look real without being buried in washes and pigments. A little goes a long way.



I also miss a good scratchbuild. This doesn't have to be a whole model, just a little part of it. A recent article on the Japanese Type 89 featured a cool scratchbuilt engine deck and we have a few cool things in the hopper.

We have also been working with the rapid prototyping process to form missing parts for the Sherman projects (an M4A2 exhaust deflector and a welded HVSS unit are seen here). I find this process very exciting. There is a great deal of potential for using this procedure as part of a model-making endeavor. Complex shapes, such as truck cabs and suspension components can be accurately rendered.

For those of you not familiar with it, "part-printing" is just how it sounds. Parts are rendering three-dimensionally based on a CAD drawing. It's almost science fiction-like, but the applications for scale

modeling are vast. Check out this video for a rough tutorial: [www.youtube.com/watch?v=jQ-aWFYT-SU](http://www.youtube.com/watch?v=jQ-aWFYT-SU)

It is relatively inexpensive to make a series of parts. Less than two hundred dollars will by get you all the parts you can fit into an area about four by four by six inches. The tricky part is the drawing and layout. There are several reasonably priced CAD programs out there and they are not too difficult to learn, especially for those with previous computer experience.

*Print-a-part*, a company specializing in rapid prototype used to make regular appearances at modeling shows in the U.S. to increase awareness among modelers. They are now part of a company called *Fineline Prototyping* and more information about them and their work can be found at [www.finelineprototyping.com/landing/?id=printapart.com](http://www.finelineprototyping.com/landing/?id=printapart.com) You just might be fascinated.

### Fifty-Four is at your door

Lots of new stuff from Ampersand on the horizon and this is the opening salvo. Look for more stuff soon and check our website for the very latest here on 6th Avenue.

—Pat Stansell

www.ampersandpubco.com



I whip hair back and forth

PAT STANSELL

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# Short Takes

what's new, anyway?

## Aber

There is a lot of competition these days when it comes to etched brass, but Aber is still going strong after all this time. We've seen them branch out to producing turned barrels and other small bits, as well as expanding the scope of their photo-etch detail sets.



35K05, Sd.Kfz. 140/1 Aufklärungspanzer 38(t) mit 2cm KwK. 38, \$84.95 is Aber's version of a super set tailor-made for the Dragon kit (6294) but could probably work on the Italeri offering also.

35241, Soviet 76.2mm M1936 (F22) Divisional Gun, TBA is a nice gun shield set that will



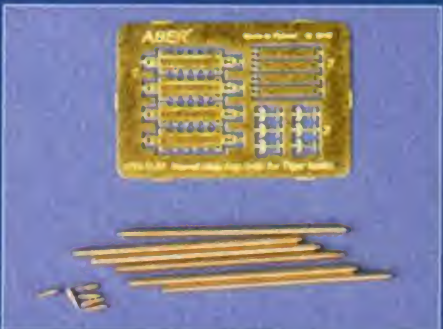
work with either the Bronco or the ICM kit.

Some turned barrels that you can put to good use are 35L81, Set of 2 standard barrels for U.S. aircraft machine guns cal .50 Browning ANM2, TBA; 35L87, Set of 4 German 2cm L/65 Gun



Barrels Flak 38 for Flakvierling 38, TBA; 35L99, Set of 7 Barrels Tips for Soviet Degtjarew DT; DP Machine Guns, TBA; 35L-100, Set of 5.5cm Rheinmetall Geraet 58 Barrels for German E-50 Flakpanzer or Panther G/F Chassis, TBA; 35L104, Barrel for Soviet 76.2mm M1936 (F22) Divisional Gun and 35L112, Soviet 45 mm 20 K tank barrel for BT-7, TBA.

Tiger maniacs have been dying for this little detail and now it's here; R-31, Barrel Cleaning



Rods with Brackets for Tiger I and King Tiger, TBA.

Aber has been doing a lot of stuff in other scales for AFV kits, too. Quarter scale fans in dire need of proper tool holders will love 48A22, German Tool Holder-Early Used Up To 1943, TBA and 48A23, German Tool Holders-Later Used Up from 1943, TBA.

Tasca's Panzer II can now get the Aber treatment with two sets: 24T01, German Light Tank Pz.Kpfw. II, Ausf. F (Tasca), \$15.95 and 24T02, Set of Barrels for Pz.Kpfw. II, Ausf. F (Tasca), \$15.95.

The rest of the haul looks like this: 48L23, 37mm M6 US barrel to M8 Greyhound, M3, M3A1, M3A3, M3A4 Lee, TBA; 25L02, Turned Barrel for German Machine Gun MG34, TBA; 16044, Russian Heavy Tank KV-1 or KV-2 Vol. 2-Tool Boxes Early, TBA; 16046, Russian Heavy Tank KV-1 Vol. 4-Box Type Lubricant Tank, TBA; 72L49, German 75mm Pak 39L/48 for Jagdpanzer 38(t) Hetzer, TBA and 72L51, Set of Barrels for German Heavy Tank Maus, TBA.

Keeping up with Aber is easy by going to <http://aber.net.pl/> and the U.S. importer is Pacific Coast Models ([www.pacmodels.com](http://www.pacmodels.com))





## Accurate Armour

Hands down, the hottest kit in this issue has to be K016, Lincoln Machine No.1 Little Willie 1916, \$58.33.

This is a full kit of the first truly recognizable tank. It is depicted as the real thing is displayed at the Royal Armoured Corps Tank Museum at Bovington without its dummy turret and tail wheels.



Also in store is another incarnation of the redoubtable Scammell: K127, Scammell Explorer, \$141.67. This wrecker superceded the WWII Scammell Pioneer from 1950 on and saw action in Korea.



K172, Humber FWD Light Ambulance, \$58.33 is another really handsome soft skin that is well known for its service in WWII.

Accurate has gone crazy over the modern Foden trucks lately with three different versions of the modern hauler: K158 Foden 6x6 Recovery Operation HERRICK Version, \$158.33; K179 Foden DROPS - British Army 8x6 IMMLC (Includes M138 ISO Flatrack), \$150.00; K180 Foden IMMLC DROPS Operation HERRICK Version, \$158.33 and C094, Malaysian Dingo (Ferret turret), \$18.33. This is a conversion to make your MiniArt Dingo more unique.

There were also some accessories in 1:35 scale: A058, ISO 20 Foot Container, \$ 29.17; A135, L129A1 Sharpshooter Weapon set (Qty-5), \$7.50; A136 Modern Snacks #1, \$7.50; A137 Standard DROPS Flatrack for Pallets and General Loads, \$21.67; A138, DROPS Flatrack - ISO & General Loads, \$21.67; A139, DROPS 155mm Ammunition Load, \$33.33; A140, AS90 155mm ULC Ammunition Set, \$16.67; A142, ISO 20 Foot Bulk Water Tank, \$33.33; A144, Cargo Load Straps, \$5.83; D43, UK Cam Nets Post WW2, \$8.33; D44, UK



Cam Nets Post WW2 Worn, \$8.33; DE26, Ambulance Red Crosses, \$4.17; DE27, Ambulance Red Crescents, \$4.17; DE28, Vehicle Pennants & Patches #1, \$5.00 and DE29, WW2 UK Services Logos #1, \$5.00.

Accurate has also put out a bunch of 1:48th WWII RAF scale airfield vehicle kits. Don't turn your noses up at this. We are sure that they guarantee to be an interesting and rewarding challenge, especially for you tuff truck fans out there. Check this out: K48009, Bedford QL 950 Gallon AVTUR Refueller with booms, \$54.17; K48010, Thompson VC 3-Wheeled Refueller, \$29.17; K48015, AEC 6x6 Coles EMA Mk-VII Crane, \$58.33 K48009, Bedford QL 950 Gallon AVTUR Refueller with Booms, \$54.17 and K48012, Bedford QL 950 Gallon Petrol Tanker, \$54.17.

The "coming soon" list will leave you drooling in anticipation as well: C087, Centurion ARV Mk-1, K131, Alvis Saladin Mk-2 FV603C Armoured Car, K173, 1943 Humber FWD 8cwt BBC Recording Van and K175, Jackal-1 4x4 SRV (Unarmoured Twin gpmg/gpmg) UK.

Despite the word being out on the street that Hobby Boss is doing the Land Rover in styrene, AA is still plugging away on this subject with LR010, TANGI RUC 110 Armoured Land Rover and LR015, SNATCH (CAV100 N.I.) Armoured Land Rover on the way.

Look all of this up for yourself at [www.accurate-armour.com](http://www.accurate-armour.com)

## Academy

Academy has been taking a page from the Chinese playbook by releasing a variant of their Merkava kit: 13227, Merkava Mk. IV LIC "Low Intensity Conflict," \$49.00. This version includes the upgrades such as improved side skirts, belly armor, and other small details that were previously only avail-



able in the Legend from Korea's upgrade kit. Two figures sculpted by Douglas Lee are also included. Academy now features online building guides for some of their new releases that can even be accessed through certain mobile phones. If you want to check this out, try this link: [http://www.academy.co.kr/mobile/merkava\\_lie/](http://www.academy.co.kr/mobile/merkava_lie/)

They also have thrown their hat into the Humvee ring with 13225, M1151 Expanded Capacity Armament Carrier, \$43.00. We're interested to see what this kit looks like...

Academy is imported and distributed in the U.S. by Model Rectifier Corporation ([www.modelrec.com](http://www.modelrec.com)).



## AFV Club

The Club turns the world upside down with news of a brand spankin' new LVT in the form of AF35205 U.S. "Water Buffalo" LVT-4 (Early Version), TBA.

Two new variants of their spectacular Churchill tank are rolling out the doors: 35154, Churchill MK IV L/50 6 Pounder Gun, \$48.98 and 35169 British Infantry Tank Churchill Mk.IV AVRE, TBA.

There was a food fight at the staff lunch meeting over who would get dibs on the AVRE.

The Club has taken a crack at the redoubtable U.S. M2 105mm gun with: 35160, 105mm Howitzer M2A1 Carriage M2 (WWII Version), \$38.00 and 35182, U.S. 105mm Howitzer M2A1 w/M2A2 Gun Carriage (WWII



Version), \$38.00. Considering the Club's reputation when it comes to artillery kits, they'll be worth every penny.

Here are some of the accessory kits we've seen lately: AF35194, Suspension and Wheels for Sd.Kfz. 164 & 165, \$19.98; AG35024, Chain & Spring Hanger for M1132 Stryker ESV Mine Plow, \$24.00 and AG35030, US 105mm Howitzer Ammo Set, \$17.00.

AFV Club has been dabbling in rotor-wing subjects lately. 35S62, Republic of China Army OH-58D Warrior Observer/Light Attack Helicopter, \$74.00 is a re-box of the 1:35 scale MRC kit with some nifty photo-etch and resin detail parts.

We have been waiting for someone to do this one for a long, long

time: 35S64 U.S. 3-inch Gun M5 On Carriage M1 (Early Version) (Limited Edition), TBA. When the shock and awe wears off, look up the AFV Club list at their U.S. importer, Merit International ([www.merit-intl.com](http://www.merit-intl.com)).





## Alpine

There are very few individuals on the face of the Earth that do not await the next Alpine releases with bated breath.



In 1:16 scale we have a German, a GI and a Brit: 16011, Grenadier "Kampfgruppe Hansen," \$50.00; 16012, BAR Gunner US 29th Infantry Division, \$50.00 and 16013 WW2 British S.A.S. Commando, \$50.00.

1:35 scale is a mixed bag with WWII Germans, Russkies and U.S. Tankers:

35111, WSS Grenadier Late War #1, \$16.50; 35112, WSS Grenadier Late War #2, \$16.50; 35113, WSS Grenadier Late War Set (35111 and 35112), \$32.00; 35114, WW2 US AFV Crew #1, \$16.50; 35115, WW2 US AFV Crew #2, \$16.50; 35116, WW2 US AFV Crew Set (35114 and 35115), \$32.00; 35117, Russian AFV Crew 44/45 #1, \$16.50; 35118, Russian AFV Crew 44/45 #2, \$16.50; 35119, Russian AFV Crew 44/45 Set (35117 and 35118), \$32.00; 35120, Michael Wittmann 1944, \$16.50; 35121, Balthasar "Bobby" Woll, \$16.50 and 35122, Tiger Aces in Normandy (35120 and 35121) \$32.00. Alpine's web address is [www.alpineminiatures.com](http://www.alpineminiatures.com)

## Bravo 6

We can feel the jungle heat and smell the napalm at the mere mention of Bravo 6. We know you feel the same way.

Be on the lookout for these new resin figures: 35009, US Mechanized Infantry (2) Brothers Nam '69; 35024, US Navy SEALs (3) Vietnam; 35025, USMC Ontos Crew, 'Nam '68; 35038, U.S.M.C. (7) Medic & WIA TET'68; 35040, US Army Special Forces Officer Nam; 35041, "US Military Police -Nam;" 35042, "Me so Horny!;" 35105, Banzai!!! - Peleliu 1944 and 35201, Huguette Agony (1) - Dien Bien Phu '54. We are really looking forward to that last one. No one else pays attention to the French era of the Vietnam War. Bravo 6 is live and in person at <http://bravo6.diorama.ru>



## AK Interactive

Well, it looks like the new venture from Mig Jimenez is off the ground and gaining altitude. They now have a North American division, AK Interactive USA ([www.ak-interactive-usa.com](http://www.ak-interactive-usa.com)). One issue that their distinguished spokesman clarified for us is that Vallejo is not part of this company.

We got a sample of the new cinematic endeavor called Weathering In One Hour (Painting a Sd.Kfz. 222), \$19.95 By Mig Jimenez. We took a look at it. It's a great motivator for those who are hesitant about using modern weathering techniques.

If you want to modulate, check these out: 001, 4B0 Russian Green Special Modulation Set 002, \$21.95 and German Dunkelgelb Special Modulation Set, \$21.95. These sets are like a great paintjob in a box.

It's raining washes and effects these days: 024, Dark Streaking Grime, \$5.95; 045, Dark Brown For Green Vehicles, \$5.95; 046,



Streaking Grime for Africa Korps, \$5.95; 069, Streaking Grime for Panzer Grey, \$5.95; 070, Wash For Panzer Grey, \$5.95; 074, Rain Marks for NATO Tanks, \$5.95; 075, Wash for NATO Tanks, \$5.95; 078, Damp Earth, \$5.95; 079, Wet Effects Fluid, \$5.95; 080, Summer Kursk Earth, \$5.95; 082, Engine Grime, \$5.95; 083, Wash for Tracks, \$5.95 and 084, Fresh Engine Oil, \$5.95.

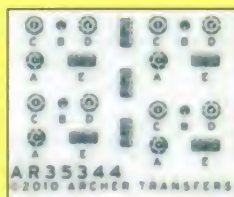
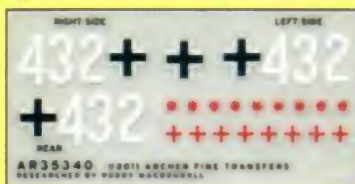
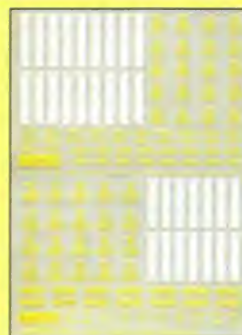
The best value for their weathering effects though has to be their sets. These are collections of some of the products mentioned above: 064, Weathering Set For Green Vehicles, \$17.85; 068, Africa Korps Weathering Set, \$17.85; 073, NATO Weathering Set, \$17.85; 077, Heavy Muddy Set Model, \$22.95 and 087, Engines And Metal Weathering Set, \$27.95.

## Archer

The neatest thing we saw from the Archer camp lately is their series of disc camouflage masks that are tailor-made to match up with some of their marking sets for that absolutely perfect ambush scheme. So far, they have 35336, German Ambush Camouflage Disk Pattern For Panther G's #1(MAN and MNH), \$32.50; 35337A, German Ambush Camouflage Disk Pattern For Panther G's (MNH) #2, \$32.50; 35337B, German Ambush Camouflage Disk Pattern For Vomag Jagdpanzer IV's and IV-70's, \$22.50; 35338, German Ambush Camouflage Disk Pattern For Panther G's (MAN and MNH) #3, \$32.50 and 35339, German Ambush Camouflage Disk Pattern For Panther G's (MAN and MNH) #4, \$32.50.

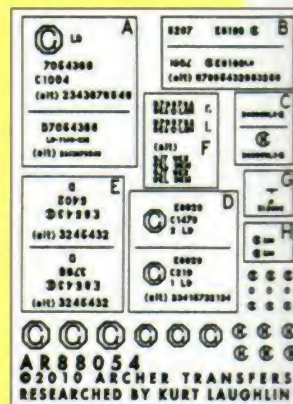
Learn more about the backstory behind this product at [www.archer-transfers.com](http://www.archer-transfers.com)

The fun doesn't stop there either. The idea bank at Archer never empties: 35340, 6th Panzer Division Pz.Kpfw. IV Ausf. J, \$6.95; 35341, 6th Panzer Division Sd.Kfz. 250/9 Ausf. B, \$5.95; 35342, 155mm and 203mm Cartridge and Shell Stencils, \$10.95; 35343, Felderhalle Division Sd.Kfz. 250/1 Ausf. B, \$6.95; 35344, Opel Blitz Instruments And Placards (Dragon), \$6.95; 35345, M4A1 Sherman (Late) "Battling Bitch," \$8.95; 35346, Free French Flags, \$11.95; 35347, Panther Ausf. G Czechoslovakia, 1945, \$6.95; 35348, Tiger 1,



Late Production, Eastern Front, 1944, \$6.95; 35349, V3000S Instruments and Placards (ICM), \$6.95; 35350, Panther Ausf. A, D and G Exterior Stencils, \$5.95; 35351, Panther Ausf. A, D and G Interior Stencils, \$6.95; 35352B, German Medical and Miscellaneous Black Cargo Box Stencils for Unpainted Boxes \$5.95; 35352W, German Medical and Miscellaneous Black Cargo Box Stencils for Painted Boxes \$5.95; 35353, Tiger Tank interior Stencils, \$5.95; 35354, White Scout Car Instruments and Placards (Hobby Boss), \$7.95; 35355, Sd.Kfz.10/5 Instruments and Placards (Dragon), \$7.95; 35356, M113 Instruments and Placards, \$14.95 and 35357, M4A3E2 Jumbo Sherman Cobra King, \$16.95.

As far as the surface details go, our hands-down favorite was 88054, M4A3 (76) HVSS Casting Symbols, \$6.95. This is a great way to fill in all those missing casting marks on any Sherman kit. Some other releases that may come in handy are 88051, 1:48 Resin Bridge Rivets, \$17.95; 88052, 1:87 (HO) Resin Bridge Rivets, \$17.95 and 88053, 1:160 (N) Resin Bridge Rivets, \$17.95; 88058, M4A3E2 Casting Symbols, \$6.95; 88059, Weld beads .040 Inch Wide, \$17.95; 88060, Weld beads .030 Inch Wide, \$17.95; 88061, Weld beads .025 Inch Wide, \$17.95 and 88062, Resin Weld Beads .015 Inch Wide, \$17.95.





## Black Dog

Hallelujah! It's raining men—Mini men from Black Dog, that is.

They have been assaulting on the figure front with a vengeance since they started releasing them last year. The Modern U.S. theme continues with F35010, EOD Operations in Iraq (Bomb Defusing), €13.00; F35011, EOD Operations in Iraq (Technician using PC), €13.00 and F35012, EOD Team in Iraq (F35010 and F35011), €23.50.

The modern U.S. figures are now joined by Canadians: F35013, Canadian Tank Crew in Afghanistan #1, €13.00; F35014, Canadian Tank Crew in Afghanistan #2, €13.00; F35015, Canadian Army Tank Crew in Afghanistan (2 Figures), €23.50; F35016, Canadian Soldier in Afghanistan No.1, €13.00; F35017, Canadian Soldier in Afghanistan No.2, €13.00 and F35018, Canadian Soldier Team in Afghanistan (35016 and 35017), €23.50.

In case you can't live without Germans, they now have those too: F35019, Wehrmacht Grenadier 1944, €13.00; F35020, Wehrmacht Soldier 1944, €13.00; F35021, Wehrmacht Soldiers 1944, €23.50; F35022, Leutnant Grenadier Ardennes 1945, €13.00; F35023, Grenadier Panzerschreck Ardennes 1945, €13.00 and F35024, Grenadiers Ardennes 1945, €23.50.

They didn't skip out on The Great War either: F35025, Gefreiter 1917, €13.00 and F35026,

Gefreiter Sappenpanzer 1917, €13.00.

If you are in need of some modern British guys, take note: F35027, British Driver Defender Wolf Afghanistan, €13.00; F35028, British Driver and Gunner Defender Wolf Afghanistan, €23.50; F35029, British Crew Defender Wolf Afghanistan, €34.00; F35030, British tank Crew in Afghanistan No.1, €13.00; F35031, British



Tank Crew in Afghanistan No.2, €13.00 and F35032, British Army Tank Crew in Afghanistan, €23.50.

There's even a set in 1:48 scale: T48059, 1:48 Grandmother and Grandson, €10.20.

If that doesn't make your day, you really ought to check out these new resin accessories: T35033, Canadian LAV III accessories set (Trumpeter), €22.00; T35034, US M2 Big Accessories Set (Dragon), €22.00; T35035, US M2 Accessories Set No.1 (Dragon), €16.60; T35036, US M2 Accessories Set No.2 (Dragon), €12.75; T35039,

Leopard 2A6M CAN Barracuda, TBA; T35040, Universal Ammo Boxes, €17.60; T35041, Food Supplies, €17.60; T35042, German Steyr 1500A Big Accessories Set (Tamiya), €17.00; T35043, German Steyr 1500A Accessories Set (Tamiya), €11.75; T35044, US Jeep Big Accessories Set (Tamiya), €17.00; T35045, US Jeep Accessories Set (Tamiya), €10.20; T35046, US M10 Accessories Set (Academy), €17.00; T35047, US M20 big Accessories Set (Tamiya), €17.00; T35049, US M3A1 Scout Car Accessories Set (Hobby Boss), €18.50; T35050, Defender Wolf Accessories Set (Hobby Boss), €28.60; T35051, Defender Wolf Accessories Set With Crew (Hobby Boss), €52.10; T35052, Sd.Kfz.11 Accessories Set (AFV Club), €18.50; T35053, Canadian LAV III Lorit Accessories Set (Trumpeter), €44.00 and T35054, Canadian Equipment Accessories Set, €17.00.

That's just the 1:35 scale releases. They didn't forget the 1:72 scale fans out there: T72024, Food supplies Accessories Set €10.20; T72025, Barrels Accessories Set €10.20; T72026, Boxes Accessories Set €10.20; T72027, Egyptian SPG 122 mm, €11.00; T72028, Israeli Equipment 1, €10.20; T72029, Israeli Equipment 2, €10.20 and T72030, Israeli Equipment 3, €10.20.

If you are into that sort of thing, you may also want to check out their 90mm, 75mm, 54mm, and 1:10 scale collector figures. More information is always available at [www.blackdog.cz](http://www.blackdog.cz)

## Bronco

Bronco continues to make a lot of noise. They had a relatively quiet beginning a couple of years ago. Now they seem poised to give the other Chinese giants like Dragon, Hobby Boss and Trumpeter a run for their money. Thanks to Dragon USA ([www.dragonusa.com](http://www.dragonusa.com)) taking over distribution in the U.S., we were able to get our grubby paws on some of the latest offerings. They also are putting free Concord titles in some of the kit boxes. Very Cool! We were very impressed and will be brining you some in-depth reviews of Bronco's exciting new styrene in the near future.

There seems to be no slowing down when it comes to aftermarket track sets: AB3541, Panther Early Type Workable Track Link Set, \$19.95; AB3542, Sherman T51 Workable Track Link Set, \$14.95; AB3543, Sherman Double I Workable Track Link Set, \$14.95; AB3546, Sherman T54E1 Workable Track Link Set, \$14.95 and AB3547, Sherman Cuff Type Workable Track Link Set, \$14.95.

A lot of people are really pumped about the Humvee releases. The aftermarket has swarmed this subject like there's blood in the water. The lat-

est incarnation is CB35092, M1114 Up-Armored (Heavy) HA Tactical Vehicle, \$59.95.

There's been a lot of cheering about the Archer tank destroyer on the web: CB35074, 17 Pounder Self-Propelled Gun "Archer," \$69.95.

German armor fans will be kickin' and screaming about these two: CB35043, Sd.Kfz. 6/2 (BN9) 3.7cm Flak36 auf Fahrgestell Zugkraftwagen/Late production, \$59.95 and CB35061, German Panzerkampfwagen II Ausf. D1, Sd.Kfz. 121, \$43.95.

The other good news

tank gun 'PHEASANT,' TBA; CB35073, US 155mm Howitzer M1A1, TBA; CB35077, Valentine SPG "Bishop," \$62.95; CB35078, PLA Marines Force Soldier On 60th National Day Parade, TBA; CB35081, Humber Armored Car Mk. IV \$57.95; CB35082, YW-531C Armored Personnel Carrier, \$39.95; CB35083, YW-750 Armored Ambulance Vehicle, \$39.95; CB35086, Type 63-1 (YW-531A) APC (Early Production), TBA; CB35087, British 17pdr Anti-Tank Gun Crew Set, \$17.95; CB35091, YW-701A Armored Command & Control Vehicle (Gulf War), \$39.95; CB35093, GAZ-69A 4x4 Personal Truck, \$39.95; CB35096, Soviet GAZ 69(M) 4x4 Utility Truck, \$42.95; CB35099, GAZ-69 Anti-Tank Vehicle 2P26 "Baby Carriage," TBA and CB35081S, Humber Armored Car Mk.IV Special Edition, \$57.95.

Bronco has also made their first venture into quarter scale territory: ZB48001, Staghound Mk.III Armoured Car, \$32.95.

And, of course, everyone is freaking

out about 35069, U.S. Light Tank M-24 'Chaffee' w/ crew, TBA.

The Bronco home page is still in the same place: [www.bronco-model.com](http://www.bronco-model.com)



is all of this: CB35041, Sd. Kfz.6 - Mittlerer Zugkraftwagen 5t (BN9b) Pioneer Version, \$62.95; CB35056, German 76.2mm Pak36(r) Anti-Tank Gun, \$26.95; CB35063, PLA Paratroops Soldier on National Day Parade, \$14.75; CB35064, PLA Special Force Soldier on National Day Parade, \$14.75; CB35070, German 15 cm Panzerwerfer 42 (Zehnlng) auf SWS, \$69.95; CB35071, British 17/25 pdr. Anti-

## US 155mm Howitzer M1A1



CB35073 1/35 SCALE

美国155毫米榴弹炮M1A1



## Celticwerks Casting Source

Celticwerks has quietly slipped onto the scene with some resin accessories. They have two modification kits for armor subjects so far. 3501, T-55 Stripped Motor Compartment, \$29.00 is a one-piece affair designed to drop into the Tamiya T-55. 3502, T-34T



Post War Tank Retriever, \$18.00 is a simple conversion kit that plugs into the turret ring of a T-34. These were used by many nations in the Warsaw Pact and Middle East.

Celticwerks also has a range of diorama accessories. They have three different resin 6x9 in. (15x23 cm) Cobblestone Road Sections available for \$24.00 each. Two handsome diorama bases were also for sale on their website ([www.celticwerks.net](http://www.celticwerks.net)): CWS004, Fountain Base with Cobblestone Street, \$22.00 and CWS005 Natural Stone Wall- Basket Weave Pattern Cobblestone, \$24.00. There were also some Columns (CWS006-CWS009), \$8.00 and Column top-pers (CWS010) \$10.00 on there. Order direct from them by using their e-mail: [celticwerks@peoplepc.com](mailto:celticwerks@peoplepc.com)

## Dragon

Dragon has been doing a LOT of expansion on their awe-inspiring lineup of base kits lately. Every once in a while they drop something really new into our lap like 6678, Imperial Japanese Navy Type 2 (Ka-Mi) Amphibious Tank, \$49.95. This is the first time we've seen this in styrene and our doors are totally blown off even though it doesn't come with the float armor (initially).



We were really jazzed when Dragon quietly slipped their version of the Opel Blitz in under the radar as a Cyber Hobby item: CY6670, Sd.Kfz. 305 German 3t 4x2 Truck, \$100.00. What's nice is that the sticker shock has abated with their second try on this kit: 6716, German 3t 4x2 Cargo Truck w/Early Type Platform, \$39.99.



## Pz.Kpfw.III (5cm) Ausf.H



There was also word from Nuremberg that Dragon is working on an M3 Lee. We will keep you in the loop on this.

By now we know you are ready for the kit list, so here goes: 3028, U.S. Navy SEAL Team 6 (8 Figures Set), \$12.95; 3527, AH-6J Little Bird "Night Stalkers," \$36.95 (Reissue); 6209, Sd.Kfz.182 King Tiger Henschel Turret

## Pz.Kpfw.IV Ausf.H



Last Production w/Transport Track, \$49.95; 6258, Panzerjäger I, 4.7cm PaK (t) Early Production, \$43.95; 6342, Flakpanzer IV Ausf. G "Wirbelwind" Early Production, \$49.95; 6531 105mm Howitzer M2A1 & Carriage M2A2 w/USMC Gun Crew, \$25.95; 6440, Bison II 15cm s.IG 33 (Sn.) auf Pz.Kpfw.II, \$49.95; 6446 Sd.Kfz. 2 Kettenrad Late Production & 3.7cm PaK 36 w/crew, \$27.95; 6493, Sd.Kfz. 186 Jagdtiger Porsche Production Type w/Zimmerit, \$49.95; 6526, Pz.Kpfw.

## Pz.Bef.Wg.I Initial Production



IV Ausf. H, Mid-Production Sep-Nov '43, \$49.95; 6538, Gebirgspioniere, Metaxas Line 1941, \$11.95; 6541, Sd.Kfz. 7/2 3.7cm Flak 36, \$59.95; 6548, M4 (105) Howitzer Tank, \$47.95; 6594 Pz.Kpfw. IV Ausf. G Apr - May 1943 Production, \$49.95; 6597, Pz.Bef.Wg. I Initial Production, \$41.95; 6631, Pz.Kpfw. III Ausf. E France 1940, \$39.99; 6642 Pz.Kpfw. III (5cm) Ausf. H Sd.Kfz. 141 Late Production, \$47.95; 6648, Panzer-grenadier Arnheim 1944, \$12.95; 6651, Panzer-Pionier-Bataillon 37, 1.Panzer-Division Leningrad 1941, \$11.95; 6653, Allied Force ETO 1944, \$12.95; 6655 Panzer-Regiment 7 10.Panzer-Division Smolensk 1941, \$10.95; 6657, VK.45.02 (P) H, \$49.95; 6671, German

Half-Track Riders (10 Figures Set), \$14.95; 6674, German "Blue Division" Spanish Volunteers Eastern Front 1942-43, \$12.50; 6675, British 25-Pdr. Field Gun Mark 2 w/Limber, TBA; 6676, Sd.Kfz. 10/5 für 2cm Flak 38, \$43.95; 6684, RSO/03 w/5cm PaK 38, \$47.95; 6698 M4A3(75)W ETO, \$47.95 and 6704 German Waffen Grenadiers 1944-45, \$11.95.

The Cyber Hobby line has something very interesting, too: CY6666, Neubau-Fahrzeuge, \$79.99. This was an early WWII German multi-

## Neubau-Fahrzeug Nr.3-5



turreted tank that has been done in resin before but not styrene. There is another incarnation of this in the regular Dragon lineup now, too: CY6690, Neubau-Fahrzeug Nr.3-5, Rheinmetall-Fahrestell und Krupp-Turm Geänderte MG-Türme, \$64.95.

We're diggin' the "Black Knight" series, too: CY6658, StuG.III Ausf. G Mid (July '43) Production mit Schurzen, "Black Knight" Series, \$47.95; CY6659, Panther Ausf. G Late Produc-

## Sd.Kfz.10/5 für 2cm Flak 38



tion, "Black Knight" Series #3, \$43.95 CY6658, StuG.III Ausf.G Mid (July '43) Production mit Schurzen, "Black Knight" Series, \$47.95 and CY6661, Jagdpanzer 38(t) Hetzer, "Black Knight" Series 2 figures included, \$34.95. We are anxious to see if the Hetzer kit is something new as the other kits are re-boxes of their excellent current series of kits with new figures and decals.

Other Cyber Hobby releases include: CY6422, Pz.Kpfw. III Ausf. I Vorpanzer, \$49.99; CY6544, Pz.Bef.Wg. III Ausf. J, \$47.99; CY6613, VK.45.02 (P) V Tiger, \$50.99; CY6660, Tiger I Mid Command

## M4A3(75)W ETO





Version, \$64.99 and CY6709, Sd.Kfz. 10 w/3.7cm PaK 35/36, \$49.99.

If you are budget conscious, take a look at the newest Orange box sets. You'll probably catch something tasty: 9124, M4A3 HVSS POA-CWS-H5 Flamethrower Plus U.S. Marines Figure Set, \$29.95; 9125, USMC M1A1 Abrams (Heavy Armor) plus U.S. Tank Crew, \$34.95; 9126, 1/35 Schwerer Panzerspähwagen Kommandowagen / Infanteriewagen (2 in 1) plus Armored Reconnaissance Figure Set, \$29.95; 9127, Jagdpanzer IV 1/70(A) plus Volksgrenadiers Figure Set, \$29.95; 9128, Sd.Kfz. 253 le Beob. Pz.Wg. plus Commander Conference Figure Set, \$29.95; 9129, Super-Heavy Self-Propelled Mortar 54cm Mörser "Loki" Gerät 041 and German Artillery Crew, \$59.95; 9130, SU-23-4M Air Defense System and Soviet Motor Rifle Troops, \$29.95; 9132, StuG.III Ausf.B with Wehrmacht Infantry,

Barbarossa 1941, \$29.95; 9133, German Super Tank "Maus" with German Tank Hunters Figure Set, \$34.95 and 9134, LVT-4 Water Buffalo with U.S. Marines Iwo Jima 1945 Figure Set, \$36.95.

Dragon has re-lit the fires in a big way for the small scale set as well: 7421, Heavy Uniform Personnel Vehicle Type 40 Winter Production (Contains 2 kits), \$17.50; 7422, Heavy Uniform Personnel Vehicle Type 40 with 2cm FlaK 38, \$17.50; 7345, Sd.Kfz. 186 Jagdtiger Henschel Production w/2 Metric Ton Lifting Crane, \$14.95; 7377, Kfz. 70 6x4 Personnel Carrier and 3.7cm PaK 35/36, \$17.50; 7378, Heavy Uniform Personnel Vehicle Type 40 (Twin Pack), \$17.50; 7387, Landing Vehicles Tracked (Armored), LVT (A)-1, \$17.95; 7388, 1/72 Landing Vehicles Tracked, LVT (A)-4, \$17.50; 7391, 1/72 German Sd.Kfz. 184 Ferdinand vs. Soviet T-34/76 Mod. 1942 (Twin Pack) (Orange), \$19.95; 7393,

Sd.Kfz. 222 Leichte Panzerspähwagen (Contains 2 kits), \$17.95; 7394, 1:72 IJA Type 95 "Ha Go" Light Tank, Philippines 1942, \$14.50; 7412, 1/4 Ton 4x4 Truck and Sherman M4A1 (76) W VSS, \$19.95 and 7420, Sd.Kfz. 223 Panzerfunkwagen (Twin Pack), \$17.50.

If you're thinking big, here's the 1:6 scale stuff: 75027, 1/6 SAS 4x4 Desert Raider w/.50 cal Browning Machine Gun, North African Campaign 1942-43, \$300.00; 75038, SAS 1/4 Ton 4x4 Truck "Desert Raider," \$109.95; 75026, M1917A1 .30 Cal Machine Gun, \$16.95 and 75028, 7.5cm PaK 97/38, \$74.95.

We saved the true Big Kahuna for last, though: 75025, 1/6 Pz.Kpfw II Ausf.B, \$249.95. We'll have more details on this if we can get our hands on one.

Dragon is on the web at [www.dragon-models.com](http://www.dragon-models.com) and Dragon USA ([www.dragonusaonline.com](http://www.dragonusaonline.com)) is the best place to shop.

## ET Model

The guys over at ET Model may have started out small, but that's not the case anymore. We doubt that these folks eat or sleep.

They went really nuts on the Bronco Humvee, and then everything else.

You will need some Visine by the time you finish this list and we suggest you go get it now.

OK, here we go. First up is the "C" series: C35-016, WWII Soviet SU-100 Tank Destroyer (Dragon); C35-018, WWII Soviet KV-1 (Trumpeter); C35-019, WWII Soviet KV-2 (Trumpeter); C35-020, WWII German Pz.Kpfw. KV-1 756(r) (Trumpeter); C35-021, WWII German Pz.Kpfw. KV-2 754(r) (Trumpeter); C35-022 WWII German sFH 18 Howitzer (Dragon); C35-025, WWII German Pz.Kpfw. II Ausf. C (Dragon); C35-027, WWII British Light Utility Car 10HP "Tilly" (Tamiya); C35-026 WWII German Pz.Kpfw. II Ausf. F (Dragon) and C35-028 WWII German 88mm FlaK 37 mit Behelfslafette (Dragon).

Now for the regular "E" series: E35-033, WWII German King Tiger Porsche Turret (Dragon); E35-039 WWII British 17prd Anti-Tank Gun Mk.I (Bronco); E35-040 - Russian BMP-3 IFV w/ Add-On Armor (Basic part) (Trumpeter); E35-041 - Russian BMP-3 IFV w/ Add-On Armor (Trumpeter); E35-052, M7 Priest Mid Production (Dragon); E35-046, Steam Locomotive BR86 DRG Basic (Trumpeter); E35-047, Steam Locomotive BR86 DRG Cab (Trumpeter); E35-048, Steam Locomotive BR86 DRG Wheels (Trumpeter); E35-050, Canadian LAV III Armored Vehicle (Trumpeter); E35-052, M7 Priest Mid Production (Dragon); E35-053, WWII Soviet JS-2 (Mod.1944) (Tamiya); E35-054, WWII Soviet JS-2 Fender (Tamiya); E35-056 WWII German Pz.Kpfw. III Ausf. M/N (Dragon); E35-057, Russian T-62 Mod.1972 Basic (Trumpeter); E35-058, Russian T-62 Stowage Bins For (Trumpeter); E35-059, Russian T-62 Fender For (Trumpeter); E35-060, B1 Centauro Late Version (3rd Series) Basic set (Trumpeter); E35-061, B1 Centauro Late Version (3rd Series) Machine Gun (Trumpeter); E35-062, M7 Priest Ammunition Stowage (Dragon); E35-063, Russian T-62 Oil Drum (Trumpeter); E35-064 WWII Soviet BT-7 (Mod.1935) Basic (Tamiya); E35-065 WWII Soviet BT-7 (Mod.1935) Fender (Tamiya); E35-071, WWII German 7.5cm PaK 40 Anti-Tank (Dragon); E35-072, WWII Ger-



man Pz.Kpfw. I Ausf. A Basic (Early Production) (Dragon); E35-073, WWII German Pz.Kpfw. I Ausf. A Fender (Dragon); E35-074 US ARMY M1114 HUMVEE Basic (Bronco); E35-075 US ARMY M1114 HUMVEE Gunner Protection (Bronco); E35-076 US ARMY M1114 HUMVEE High Back Seats (Bronco); E35-077 US ARMY M1114 HUMVEE Smoke Discharger (Bronco); E35-079 US ARMY M1114 HUMVEE Interim Add Armour (Bronco); E35-080, Russian PT-76 Light Amphibious Tank Mod.1951 (Trumpeter); E35-083 Czech Republic 152mm ShkH vz.77 DANA (Hobby Boss); E35-084, WWII German Pz.Kpfw.IV Ausf.F2/G Basic (Dragon); E35-086, WWII German Pz.Kpfw.IV Ausf.G April - May 1943 Production Schurzen (Dragon); E35-092 WWII British Sherman IC Firefly Hybrid (Dragon); E35-093 USMC M50A1 "Ontos" Anti-Tank Vehicle (Academy); E35-097, Israeli Merkava Mk.IV Tank LIC Basic (Academy); E35-098, Israeli

Merkava Mk.IV Tank LIC Side Skirts For (Academy) and E35-099, Swedish Infantry Fighting Vehicle CV9040B For (Academy).

The "EA" accessory series looked like this: EA35-027, WWII German King Tiger/Jagdtiger Fender & Side Skirts; EA35-033 WWII German Pz.Kpfw. III Ausf. M/N Schurzen (Dragon); EA35-034 US ARMY Cal .30 M19A1 Ammunition Can; EA35-035 US ARMY Cal .50 M2A1 Ammunition Can; EA35-036 US ARMY PA-108 'Fat 50' Ammunition Can; EA35-037 US ARMY M548 40mm Ammo Box; EA35-038 US ARMY PA-120 40mm Ammo Box; EA35-039 WWII Soviet BT-7/T-26 Night Fighting Search Lights; EA35-040, M2HB MG with .50 Rounds Ammunition Can; EA35-043, Soviet 12.7mm DShK/DShKM AA Machine Gun; EA35-044 Soviet 12.7mm DShK/DShKM Ammo Box; EA35-047, WWII German Pz.Kpfw.IV Fender Late version (Dragon); EA35-050 US ARMY HUMVEE CIP; EA35-051 US ARMY HUMVEE MK.19 Weapon Groups; EA35-052 US ARMY HUMVEE M2HB Weapon Groups and EA35-054, Israeli Merkava IV Tank Chains Set.

They also did some resin bits and pieces: ER35-009, US Army Crew Duke IED Antennas; ER35-010, US ARMY Stryker Armored Vehicle Weighted Road Wheels (Trumpeter); ER35-012, Canadian LAV III Armored Vehicle Weighted Road Wheels (Trumpeter); ER35-014, Republic 152mm ShkH vz.77 DANA Weighted Road Wheels (Hobby Boss); ER35-015 US ARMY HUMVEE Weighted Road Wheels (Bronco); ER35-016 US ARMY HUMVEE All-Terrain Wheels (Bronco); ER35-018 LAV Weighted Road Wheels Narrow (Bronco); ER35-019, Defender XD "Wolf" W.M.I.K Weighted Road Wheels (G90) Type 1 (Hobby Boss) and ER35-020, Defender XD "Wolf" W.M.I.K Weighted Road Wheels (G90) Type 2 (Hobby Boss).

These dudes have also jumped into the Super Set game: S35-001, WWII German TIGER I Late Production Value Package (Dragon).

ET ([www.etmodeller.com](http://www.etmodeller.com)) is now a major contender in the photo-etch market and you should not pass them by. Shop them up in North America through The Barrel Store ([www.thebarrelstore.com](http://www.thebarrelstore.com)).



## Griffon

Griffon Model ([www.griffonmodel.com](http://www.griffonmodel.com)) is a Chinese photo-etch company that is imported to the U.S. by Dragon USA ([www.dragonusaonline.com](http://www.dragonusaonline.com)) just like nearly everything else these days. Griffon is distinctive in the fact that you can pick the level of insanity you want to indulge in. We like this approach since it allows modelers to find the right compromise between their budget and the level of detail they want.

For instance: L35032, American Quad Gun Trailer M55 (Dragon), \$17.95; L35A091, American Multiple .50 Caliber Machine Gun Mount M45/M45C/M45D Vehicle/Trailer Mount, \$13.95 and SBPL35005, American Quad Gun

Trailer M55 Royal Edition, \$52.95 are all for the Dragon M55 quad 50.

They did the same thing for the Dragon Wirblewind: L35011, German 2cm Flakpanzer IV "Wirblewind" (Dragon), \$43.95; L35035, German 2cm Flakpanzer IV "Wirblewind" (Dragon), \$31.95; L35A062, German "Wirblewind" Turret-Mount 2cm Flak-Vierling 38 & Turret Interior Upgrade Set, \$19.95; L35A063, German "Wirblewind" Fighting Compartment Hull Section Interior (Dragon), \$9.95 and BPL35006, German 2cm Flakpanzer IV "Wirbelwind" Royal Edition, \$94.95; MBPL35013, WWII German Sd.Kfz.7/2 3.7cm Flak 37, Armour Driver's Cab Version (Premium Edition) for Dragon Kit # 6542, \$74.95 and ML35033, WWII German Sd.Kfz. 7/2 3.7cm Flak 37, Armour Driver's Cab Version, Full detail set for Dragon kit # 6542, \$49.95.

The madness now extends to the Dragon Sd.Kfz 7/2 as well: ML35A064, 6-Round 3.7cm Ammo Clip Containers for WWII German 3.7cm Flak 36/37 (5 x Ammo Clip & 6 x 3.7cm HE



Round Inside), \$12.95; ML35A065, 6-Round 3.7cm Ammo Clip for WWII German 3.7cm Flak 36/37 (10 pcs.), \$7.95; ML35A066, 12/16-Round Metal Ammo Storage Bins for WWII German 3.7cm Flak (2 types), \$9.95; ML35A067, 12/16-Round Metal Ammo Storage Bins for WWII German 3.7cm Flak (2 types), \$9.95; ML35A070, 16-Round Ammo Storage Cartons for WWII German 3.7cm Flak, \$6.95;

ML35A071, 12-Round Wood Ammo Storage Bins for WWII German 3.7cm Flak, \$11.50; ML35A081, Engine Compartment Update Set for WWII German Armor Driver's Cab Type Sd.Kfz.7 Series Vehicle, \$15.95; ML35A082, Addition Protective Armor Plate for Ra-

diator of WWII German Sd.Kfz.7/2 Flak 36/37, Armor Driver's Cab Version, \$5.95; ML35A083, Spare Road Wheel Locker / Rack & Rear Storage Locker for WWII German Sd.Kfz.7/2 Flak 36/37, Armor Driver's Cab Version, \$8.95; ML35A084, Update Set for WWII German Vehicle Mount 3.7cm Flak 37, \$21.95; ML35A085, Slatted Mesh Type Folding Side / Rear Platforms for WWII German Sd.Kfz.7/2 Flak 36/37, Armor Driver's Cab Version, \$24.95; ML35A086, Gun Shield for WWII German 3.7cm Flak 37, \$8.95; MMA35006, 3.7cm Spgr.Patr.18 HE Ammo for WWII German 3.7cm Flak, \$8.95; MMA35007, 3.7cm Spgr.Patr.18 AP Ammo for WWII German 3.7cm Flak, \$8.95; MMA35008, 3.7cm Ammo Shell Case for WWII German 3.7cm Flak, \$8.95 and MSBPL35008, WWII German Sd.Kfz.7/2 3.7cm Flak 37, Armor Driver's Cab Version Royal Edition Super Bonus Pack (Dragon), \$99.95. Ouch! Obviously, some of these could come in handy for any 3.7cm Flak gun.

## Joefix Studios

Joefix Studios is a new name to us. They make a variety of bits and pieces that you are bound to be useful.

This includes groundwork products such as 148, Grass Strips Winter; 149, Grass Tufts Spring; 150, Grass Strips Spring; 213, Nam Bush 10 and 214, Nam Bush 11.

They also do tools: 408, Set Clamps A; 409, Set Clamps B and 410, Tweezer.

The fun doesn't stop there. Not by a long shot. They also do make camo nets and itty-bitty chains: 720, Camouflage Net Grey Color; 721, Camouflage Net Desert Color; 722, Camouflage Net Green Color; 966, Chain 10 Links/cm, 500mm Long; 967, Chain 8 Links/cm, 500mm Long and 970, Chain 6 Links/cm, 500mm Long.

This is just the latest stuff. You can download a complete catalog at [www.joefix-studio.be](http://www.joefix-studio.be) and shop for them at the Michigan Toy Soldier Company ([www.michtoy.com](http://www.michtoy.com)) or see their ad elsewhere in this very magazine.



## K59

These guys really get into the details. We saw some interesting stuff in the works from them on the website ([www.k59production.blogspot.com](http://www.k59production.blogspot.com)). They are devoting some serious attention to the new Bronco 76.2 mm gun with C-018, 76.2mm F22 (Bronco), TBA. This set includes a turned barrel, replacement breechblock and cradle. There is also a nice upgrade set for the Dana on the website, but it's not available for sale yet.



They also had some replacement RSO wheels available: Z-05, RSO Road Wheel, \$11.95.

There was one item on the 1120 sub-line: Z-04, MG-34/42 Drum Magazine with Carrier, \$13.50. If you want more information about this stuff, drop them an e-mail at [k59@netvigator.com](mailto:k59@netvigator.com).

## Hauler

Hauler put out another full kit in 1:48 scale that will enrich your collection with HLS48011, BA-64A. Mini Art did one of these Soviet Armored Cars recently in 1:35 scale and its nice to see someone else pick up on this in an alternate scale. We thought the photo-etch open-topped MG turret and fenders were nice touches.

There's a nice load of brandy new accessory sets out from them as usual.

The 1:35 scale list is HLU35031, U.S. Pigeons of War; HLU35032, German Pigeons of War; HLU35033, Hetzer; HLU35034, Hetzer Fenders; HLU35035, Hetzer Schuerzen; HLU35036 Jeep; HLU35037, Jeep Basket and Wire Cutter; HLU35038 Opel Blitz Tankwagen (Italeri) HLU35039, Sd.Kfz. 234/2 Puma and HLU35040, Sd.Kfz. 234/2 Puma Engine Grills.

Yes, you read correctly. Pigeons of war. Be



afraid—very afraid.

The quarter scale release list is just as healthy: HLX48303, Oilcans, Tins and Accessories; HLX48304, Steyr 1500 Pritsche Railway; HLX48305, Railway Tracks; HLX48306, Jagdtiger; HLX48307, Jagdtiger Grills; HLX48308, Opel Blitz Tankwagen; HLX48309, Sd.Kfz. 234/2 Puma; HLX48310, Sd.Kfz. 234/2 Puma Engine Grills; HLX48311, U.S. Pigeons of War; HLX48312, German Pigeons of War; HLS48011, BA-64A; HLX48313 AB-43 Autoblinda (Italeri);

HLX48314, 8.8cm FLAK 37 Basic; HLX48315, 8.8cm FLAK 37 Shield and HLX48316, Pz.Kpfw. II Ausf. A, B, C. A lot of people will find the detail sets for the Italeri Puma and 88 to be especially welcome.

Know all by absorbing their website: [www.hauler.cz](http://www.hauler.cz)

## Hussar

Hussar has been quiet for a while. We usually throw in a bunch of wheel puns when it comes to this company. They do specialize in aftermarket wheels after all. Air Connection ([www.airconnection.on.ca](http://www.airconnection.on.ca)) is the main source for this stuff. They dropped us a



### Lion Marc

Lion Marc has gained a reputation around here for quietly turning out excellent accessories. Their Centurion replacement turret used in



MMIR 52 was a work of art. If you are looking to upgrade your AFV Club Churchill, take a look at 33008, Early Churchill MK IV Turret, \$14.80 and

33009, Late Churchill MK IV Turret, \$14.80.

As far as barrel sets go, look out for these newbies: 10042, Barrel Set for 2cm Flakvierling 38, \$16.50 and 50007, Skoda UV vz. 34 (KwK 34(t)) 37mm barrel for Panzer 35(t), \$12.00 at [www.lionmarc.com](http://www.lionmarc.com)



### LZ Models

Not content to wait out the world of styrene, our pals at LZ went ahead and did an M29 Weasel. Hey, we can't wait around forever! Check out 35501, American M29 Weasel, €41.32. This is the version without the floats and it is a full multi-media event.



The kit even includes a reference CD. We have a copy and we are looking forward to taking the dive.

Also up is 35502, US Army Radio Sets, €8.18. This will have a variety of uses in a variety of vehicles.

Look for the float version of the Weasel in the not too distant future and a neat treatment of the Bergehetzer, as well as other goods. For more information, see [www.lzmodels.com](http://www.lzmodels.com)

### Mantis

Mantis has released a really kickin' pair of SS dressed up in winter duds: 35025, SS Panzergrenadier #1, €12.00 and 35026, SS Panzergrenadier #2, €12.00. These two



come as a set under the title 35027, Ambush, €22.00 (35025 and 35026). Very recently they also announced some motorcycle riders that look very suited to the bitter cold of the Eastern front: 35029, German motorcyclist, WW2 Eastern Front, €12.00 is just the driver and 35030, German Motorcycle Crew, €30.00 includes the driver from 35029 and a sidecar rider.

Oh yeah, Mantis has a thing for critters. 35028, Animals set 7, €12.00. This set has some forest animals like a fox and a beaver. There's also a crane in there too. 35031, Animals Set 8, €12.00 is a nice set of bears. Hook yourself up with some Mantis resin at [www.mantisminiatures.pl](http://www.mantisminiatures.pl)

Luchs Late Wheels; 35104, Einheitsdiesel Kfz. 61 Wheels; 35105, Ford V3000 Wheels; 35106, Sd.Kfz. 6 Diana Front Wheels & Spare; 35107, Zil-157 Civilian Pattern Wheels; 35108, Type 94 6 Wheel Japanese Army Truck; 35109, Gaz 69 Wheel Rims; 35110, Sd.Kfz. 250 Wheels; 35111, Sd.Kfz. 250 Wheel Rims; 35112, Sd.Kfz. 251 Wheels Rims and 35113, RSO Wheels.

### Lion Roar/ Great Wall

Great Wall is still going strong with yet another version on their SWS halftrack kit: LNRL3521, WWII

line with an exciting list of upcoming releases. We see a lot of pertinent stuff here: 35023, BT-7 Conical Turret with 2 Roof Versions; 35081, Ural-375/4320 Wheels; 35082, BTR-60/70/80 Wheels; 35095, Long Tom Wheels; 35101, Gaz 69 Wheels; 35102, Spaepz 2 Luchs Early Wheels; 35103, Spaepz 2

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## Masterpiece Models

Masterpiece presents us with panoply of resin to brighten your cloudy day. As usual, they really mix it up when it comes to subjects. Our favorites this time around were CD7011, Atlantic Wall Bunker and Longues Battery, \$99.95 and CD7011-A, 15cm Kanone and Turret, \$29.95. These are perfect for those of you with D-Day on your minds.

Masterpiece seems to have some success with their Quonset hut kits, so now they have



given us some nice Nissen hut kits: MMNH001, (Front and Rear Walls), \$16.95 and MMNH001-A, Nissen Hut Complete Kit, \$25.95.

For anyone with a nautical bent, there's MMP008, Japanese Shinyo Boat (Sea Quake), \$64.95. This was a one-man suicide boat that was used to some effect in the Philippines and Okinawa.

Some other little bits that may pique your interest include: MMUTL001, M3A4 Utility Handcart, \$24.95; MMET004, Cobblestone Street Section, \$29.95; MMPT002-A, 1:48 Japanese Steel Pill Box, \$21.95 and MMIL70106, Collapsed Bridge Fascine Diorama Base Kit, \$79.99. For more information and to place your order, go to [www.masterpiecemodels.com](http://www.masterpiecemodels.com)

## Mini Art

Nothing seems to slow Mini Art down. They pump out a nice mix of armor kits, figures and diorama accessories month after month. The highlights are two new versions of their fabulous Valentine base kit: 35106, British Infantry Tank Mk.3 Valentine V, \$63.00 and 35116, British Infantry Tank Valentine Mk. I w/ Crew, TBA. 35116 also includes a transmission compartment. Outstanding! They also put out 35117, T-80, Special Edition, \$37.00.



The other news is really good too: 35070, U.S. Tank Crew, NW Europe, TBA; 35071, British Soldiers Tank Riders, TBA; 35086, German Civilians, TBA; 35093, Italian Tank Crew, TBA; 35098, Field Kitchen KP-42, Winter Scenery, \$36.50; 35105, French Tank Crew, TBA; 35115, Soviet Limber 52-R-353M Mod. 1942, \$27.00 and 35126, U.S. Tank Crew, TBA. Yes, that's right: An Italian AND a French tank crew. Excellent.

As far as diorama accessories go, take your pick

## Master Box

Keeping track of these guys is always a little tricky. They announce a lot of stuff, that's for sure. Lately we've had some help keeping track of the new releases from Dragon USA ([www.dragonusaonline.com](http://www.dragonusaonline.com)), their main U.S. importer. Here's



what we spotted: 3561, "Rommel", DAK WWII Era, \$14.95; 3565, Operation Milk Man, \$18.95; 3566, Domestic



Animals, \$9.95; 3567, Civilians, Western Region WWII Era, \$14.95; 3578, France 1944, \$22.95; 3580, British Infantry in Action, Battles in Northern Africa Series, \$15.95; 3588, Eastern Region Peasants, \$15.95; 3591, U.S. in Iraq, Check Point, \$14.95; 3592, Hand to Hand Combat, English-



Germany Infantry, North Africa WWII Era, \$14.95; 3593, DAK, German Infantry WWII, North Africa Desert Battle Series Set # 3 - 5 Figures Set, \$14.95; 3594, Allied Forces, North Africa WWII, \$14.95; 3573 "Soviet Cavalry, 1939-1940, 1941-1942" and 35100, German



Military Car, Typ 170 V, Tourenwagen, 4 Türen, 1937-1940, \$49.95.

Master Box has a lot of great concepts and we always try to feature the standout kits in Mini men. Their home page is [www.mbltd.info](http://www.mbltd.info)

## Mig Productions

The big news out of the Mig camp is two new conversion sets. 35-372, Taliban T-62 M1 Conversion set for (Trumpeter), \$45.00 is tailor made for the T-62 Model 1972 kit. If you really want to breathe life into that Dragon M4 composite hull kit, take a closer look at 35-373, Pacific Sherman Field Armor Upgrade, TBA. This modification is based on U.S. Army independent tank battalion vehicles that fought on Okinawa.

They have two new figures out as well: 35-330, Blackwater Soldier, \$20.00; 35-331, Advancing U.S. Navy SEAL Vol. 2, \$22.00 and MP 35-332, U.S. Navy Seal Vol. 3, \$22.00.



For some reason, this is listed on the Mig website as brand new even though we took a look at it some time ago: NV 1002-08, The Pigments.

F.A.Q. DVD Vol. 1, TBA. With subtitles and guide in German, French and Spanish.

Of course, where would we be without their wonderful weathering products?



There were new releases in every category. For washes, there was P225, Wood Aging Solution; P300, Earth Wash; P301, Warm White Wash and P302, Deep Green Wash for \$8.95 each. Two new flavors of oils at \$6.00 each: ABT180, Copper Oxide Blue (Patina) and ABT190, Faded Camouflage Maroon. New pigments are: P042, Ochre Rust, \$5.75; P043, Khaki Russian Faded and P044, Burnt Steel Blue. These retail for \$5.75.

Don't forget your filters! The new colors include P418, Warm grey for Panzer Grey and P419, Orange for Desert Camo, available for \$7.50 each. Mig is on the web worldwide at <http://migproductions.com/> and their U.S. web store is at <http://migproductions-usa.com>





## Miniman Factory

We were totally blown away by the latest version of the KrAZ truck: 35018, KrAZ-255B TMM-3 Bridgelayer, €165.00. This is a complete kit with a workable bridging system. You should really take a closer look at this beast by surf'n' on over to [www.minimanfactory.com](http://www.minimanfactory.com)

Plus a few new bit to spice up your M915: 35019, 20lbs ISO freight container incl. Decals for Maersk, Tiphook and US Army and 35020, M915 Extension pack (2 containers and 1 wind-jammer) (M915 and trailer not included).

These crazy Hungarian cats also like to take



some of their 1:35 scale kits and shrink 'em down: 48001, M1009 CUCV, €42.00 and 48002, M1008 CUCV, €42.00 are both quarter scale renditions of

kits we talked about in MMiR 53. We recently got some samples of these and will take a closer look in the near future. There are reports of a 1:48 scale Kraz on the horizon, too.



## NATO in Miniatures

Soga Miniatures ([www.soga-miniatures.com](http://www.soga-miniatures.com)) is an online store that has a gold mine of figures from Russia, Ukraine and other Eastern European countries. One of the many distinctive lines carried there is NATO in Miniatures. This company specializes in modern figures from the U.S., Germany, Russia and Great Britain. The latest from them includes: Brit-001, SAS Platoon Leader, \$17.80; Ger-001, The Bundeswehr Sniper, \$17.08; Ger-002, Soldiers of the Bundeswehr In Camp (Part1), \$45.00; Ger-003, Soldier of the Bundeswehr In Camp (Part2), \$15.00; Ger-004, "Ammo loading". Tankmens of the Bundeswehr, \$30.00; USA-011, American Sniper 82nd Airborne Division, \$17.08; USA-



015, Snipers Group 82nd Airborne Division (set 3), \$17.08 and USA-016, "Coffee," \$32.08.

Our favorite is this batch was the German ammo loaders. The most extensive part of the line is modern U.S., which is

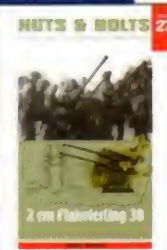
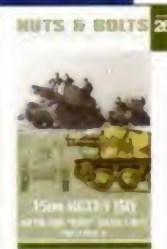
perfect for an Iraq or Afghanistan diorama.



## Nuts & Bolts

Nuts & Bolts books are a real standout in the reference publishing game. You fork out some serious cabbage for these titles, but they are an all-in-one reference and you don't need another book on the subject.

Nuts & Bolts Vol. 26 - 15cm sIG 33/1 (Sf) auf GW 38(t) "Grille" (Sd.Kfz. 138/1) Part 2: Ausf. H, \$52.50 is out now and we'll have a review of it for you next issue. Nuts & Bolts Vol.27: 2 cm Flakvierling 38, \$52.95 is currently in the chute and everyone we know is looking forward to that one. If you need more info, drop a line to our BFF Heiner Duske at [hfd.duske@t-online.de](mailto:hfd.duske@t-online.de)



## Panzerwrecks

Does anyone out there remember what the world was like before Panzerwrecks? It's kinda like life without sliced bread. You can do it, but why bother. Anyway, they have not one but two new editions out: Panzerwrecks 11: Normandy, \$32.95 and Panzerwrecks 12, \$32.95.



A closer look at Panzerwrecks 11 can be found in the book reviews section.

On the horizon is **Repairing the Panzers Vol. 2**: presented in 256 pages, illustrated with 279 photos, most unpublished, supported by original drawings, diagrams and tables.

The folks at Panzerwrecks have also taken over the **Duel in the Mist** series, so check that out, too.

Oh yeah, the website is [www.panzerwrecks.com](http://www.panzerwrecks.com) if you aren't already there.

## Perfect Scale Modellbau

The coolest resin update kit award for this edition of Short Takes goes to Perfect Scale for 35071, Leopard 2A6M CAN "Barracuda," €84.50. This is tailor-made for the Hobby Boss kit with a complete upper hull, turret and some other small bits to turn your Leopard 2A6 CAN into that oh-so-cool looking version we have seen in Afghanistan lately.

They also have a separate upgrade if you want to detail up your model without the Barracuda netting: 35068, Leopard 2A6 M CAN Upgrade Kit (Hobby Boss), €39.50.

That's not the end of the lineup, either. We could talk for the rest of the magazine about this stuff, but instead we'll just give you the list: 35069, Leopard 1 & 2 Mine



Roller, €39.50; 35072, M561 "Gama Goat" & Shelter, Hardtop w/Winch, €96.50; 35073, Leopard 1A2 Turret, €27.50; 35074, Marder 1A5 Upgrade Kit (Revell), €39.50; 35075, HMMWV & S250 Shelter, €33.50; 35076 Euro Pallet, €6.50; 35077, M149A1 Water Trailer, €34.95; DEC10, US ARMY Fuel Tanker Markings, €8.50 and DEC12 Decals Potable Water, €6.50; PE003, Warning Signs, €6.50.

Perfect Scale has also broken into show business with two new DVDs: Leopard 2 A5/A6 in Germany Part 1, €19.50 and M1A1 Abram in Germany, €19.50. Modern armor freaks should bookmark these guys at [www.perfect-scale.com](http://www.perfect-scale.com)

German sWS General Cargo Version w/3.7cm FlaK43, \$54.95. LNRL3522, WWII German Maybach HL42 TRKMS Engine for sWS, \$11.95 may come in handy if you need a motor.

These guys have slowed down when it comes to photo-etch sets, but they haven't given up the game. LAS35017, WWII German Tiger I Late Version for Dragon, \$47.95 looks to be just as complete as their

earlier releases for the King Tiger and the Panther. Where do ya find it? Dragon USA of course ([www.dragonusaonline.com](http://www.dragonusaonline.com)).

## Resicast

Resicast has truly outdone themselves this time around. Their kits have always been something to behold (think Rolls Royce Armored Car here, people),



## Pro Art Models

More great upgrades and accessories are now out from Pro Art models. Don't do a Humvee, Stryker or any other modern U.S. subject without checking out their selection at [www.proartmodels.be](http://www.proartmodels.be)

Here's the goodies we saw when we stopped by there last time: 35032, Update



Set for US HMMWV Interior (Upgraded), €23.60; 35034, Modern .50 and MK 93 Cradle (With Gun Shield & Thermal Weapon Sight (TWS), €19.40; 35035, Modern .50 and MK 93 Cradle (With Gun Shield, FMTV Gun Ring & Thermal Weapon Sight (TWS), €19.40; PAU-35037, Realistic Sagged Tires For FMTV, €17.00; 35039, US Special Forces Dumvee (Upgraded), €50.50; 35040, Low Pressure Gas Bottles, €13.20; 35041, Modern Ammunition Boxes, €14.40 and 35042, Modern .50 and MK 93 Cradle (with Gun shield, Pedestal & Thermal Weapon Sight (TWS), €19.40.

but how about this: LTD03, Comet A34, €250.00!

This hot puppy includes a full interior and is only available directly from Resicast ([www.resicast.com](http://www.resicast.com)).

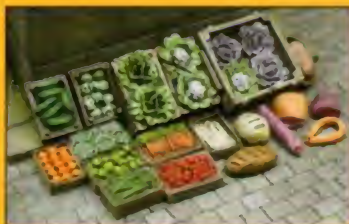
That's not the only full kit they've done lately either. No-siree-bob. They also threw out a full Sherman ARV kit, 35.1216, Sherman ARV MK II, €140.00. If you just want to convert your Tasca kit, you can get this subject as a conversion, too: 35.1214, Sherman ARV MK II, €79.00.

But wait! The full kit madness doesn't stop there.

## Reality in Scale

If you're doing a diorama, you just have to look these guys up. They are a bit pricey, but the selection and quality is amazing.

We'll pick up where we left off with this eye-popping release list: 35148, Potato/Vegetable Sacks €11.95; 35149, Business Signs On Real Wood €9.95; 35150, Beer Barrels & Milk Churns €10.95; 35151, "Under The Arches" €27.95; 35152, Small Hand Cart €9.95; 35153, Farm Well €8.95; 35154, German Equipment Set €8.95; 35155, Corinthian Column Set €17.95; 35156, Cross of Iron €3.95; 35157, Saint Statue €9.95; 35158, Farm Wall €27.95; 35159, North African Well



grass mats. It's too much to list here and we suggest you head on over to [www.realityinscale.com](http://www.realityinscale.com)

## Royal

More good pickings from Royal are in store. The latest includes some really super diorama accessories that simply should not be ignored: 605, Willys Jeep Detail Set, €18.00; 609, M13/40 (Final Production) Conversion Kit, €29.00; 627, Crewman SS Panzerdivision, €12.00; 630, German tank commander "Grossdeutschland," €12.00; 631, Panzer IV



[www.royalmodel.com/en](http://www.royalmodel.com/en)

Crewman Normandy 1944, TBA; 636, Mother with Her Children, €28.00; 638, Children Playing; 639, Evacuee Pulling Cart, €19.00; 641, Wine Barrels and Farm Accessories, €14.00 and 644, Farm Plow, €14.00. If you have any trouble at all searching for Royal Model products, give yourself a break and just order direct at

## RZM

The folks over at RZM have a new DVD they would like to share with you (actually, they probably want you to buy it). It is RZM HV-013, The Tiger Files and it sells for \$34.95.

This documentary provides the whole shebang when it comes to the Tiger. In addition to explaining the theory and design which led to the Tiger I's development and manufacture, it also offers detailed animated sequences of the Tiger I's construction and capabilities, first-hand accounts from tank crew veterans on both sides of the conflict and an investigative account and animated recreation of Tiger Tank Ace Michael Wittmann's final tank battle. This is backed-up by extensive footage and demonstrations of the Bovington Tank Museum's "Tiger 131"—the world's only operational Tiger I. Pretty schnazzy stuff.

For more information use the Google machine to go to [www.rzm.com](http://www.rzm.com)



## SKP

SKP turns out a lot of little aftermarket bits when people aren't looking.

Browsing through their website ([www.skpmodel.eu](http://www.skpmodel.eu)) is easy and you're bound to find something you want. They have been really good about sending us updates so we have the latest scoop that include both figures and accessories: 022, MG BESA for British AFVs, €3.99; 095 152 mm Howitzer vz. 18/47N, €19.99; 109, British wheels 6.00-16,



€6.40; 110, GAZ 69M, TBA; 111, Austin 10hp Light Utility Car Detail Set (Tamiya), €21.35; 112, Wren Mary, €6.40; 113, British Ammo Boxes, €6.39; 114, Cold war warrior, €6.40; 115, Tow Cables for T-72, €2.95; 118, Assault rifle vz. 58 (4 pcs.), €7.29; 119, British wheels 11.00-22, €9.49; 122, Lenses and taillights for Humvee, €6.40; 123, Detail set for GAZ-69M for Bronco/SKP kit, €19.99; 124, Lenses and Taillights for M1117 (Trumpeter), €6.40; 128, Lenses and taillights for LAV, €6.40 and 131, Lenses and taillights for GAZ-69, €6.40. Those little light sets look particularly tasty.

Hustle on over to [www.skpmodel.eu](http://www.skpmodel.eu) to check it all out.

Check out this ass-kicking cannon: 35.1217, 4.5 inch Howitzer & Limber, €59.50.

It comes with the limber. The ammo set for it is 35.2338, Brass Ammo & Baskets For 4.5 Howitzer, €12.00. Oh yeah, there's a crew: 35.5617, Gun Crew, €62.50. These figures are available separately as 35.5618, Gunner, €12.50; 35.5619, Gun Sergeant, €12.50; 35.5620 Rammer, €12.50; 35.5621 Gun Loader No.1, €12.50 and 35.5622, Gun Loader No.2, €12.50.

The rest of their stuff is a mixed bag and includes: 35.1119, S.B.G. Assault Bridge, €75.00. This is a revision of an earlier release with all new castings and reworked parts.

Some bits and pieces, including a re release or



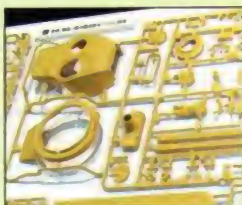
## Tamiya

So what the hell is up with Tamiya, huh? We saw the Big Man interviewed about a year ago and he promised new stuff in spite of the worldwide economic downturn. Apparently, he didn't mean armor!

The flyboys got a new Mustang in 1/32nd scale (in our opinion this should have been 1/35th), but we've been fed just bits and pieces.

For some strange reason, they released a new Sherman and called it "Israeli Tank M1 Super Sherman." This is kit number 35322 and as it sits in the box, it's a died-in-the-wool December 1944 production M4A1-76. The only thing that makes it Israeli is a light guard and some decals. One would think from a marketing point of view that it would sell better as a U.S. tank. But—no one asked us.

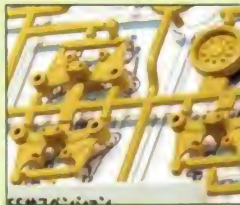
The kit is mostly new from the waist up and features nice cast texture on the hull and turret (which is the later, oval hatch model). The older raised trailing arm suspension is included, as is the older M4 lower hull. The suspension is dimensionally accurate, but lacks the finesse seen in the Tasca sets. Easily remedied, if you wish.



This release starts to make a bit more sense when you ponder 35323, Israeli M51 Super Sherman. This is based on the same vehicle, but will have to have a lot of extra plastic thrown in.

As we were going to press we discovered that this is an all-new kit. Check out the accompanying photos.

If you're the type who likes to follow the digits, here is the latest numerical list: 35311, Russian



Assault Infantry - 1941-1942, \$18.50; 35313, US Light Tank M5A1 - "Pursuit Operation," \$31.00; 35314, German Africa Corps Infantry, \$19.50; 35316, British BSA M20 w/Military Police set; 35317, German 6x4 Truck Krupp Protze - w/Three Figures; 35319, U.S. Tank T26E4 "Super Pershing" (Pre-Production), \$65.00; 35320, German Field Military Police - WWII and 12461, WWII German Insignia Decal Set - Vol.2, \$11.00.

A few comments? Sure. All the figures sets are brand new and seem to be improvement over most of the previous sets. This includes the BSA set that includes an all-new motorcycle, which is set up on a single sprue like their previous DKW.

35313 is a re-pop of good 'ol 35097 with the three man mortar team plucked from the also venerable old 35086, U.S. Gun and Mortar Team.

35317 is also a re-pop of 35104, this time with figure and a few accessories.

35219 is another real curious one. This is not the Super Pershing that saw brief service in WW2. It is actually the production pilot version of the T26E4, which only saw service in Maryland. Tamiya's latest is on the web at [www.tamiyausa.com](http://www.tamiyausa.com)

## Tasca

Life is sweeter with a little Tasca in it, don't you think? It's unrelenting the way they are putting other Sherman kits in the shade.

The following is old news, but we add it for the sake of numerical efficiency. The oft-forgotten Korean War now has fresh fodder as well with 35-023 U.S. Medium Tank M4A3E8 Sherman "Easy Eight" (Korean War), \$61.95. This last item includes the much sought after T80 tracks, as well as the armor exhaust deflector. Both these items were in use late in WW2, so the kit does not necessarily need to be built as a Korean War tank. Check your references!

35-024 M4A3E8 Sherman "Easy Eight" JGSDF, \$61.95 is pretty much the same as 35-023, but with JGSDF decals and a spiffy set of T84 rubber block tracks. These were used in Korea, so you may just have to get one just for that reason!



We remain all a twitter above the upcoming release of the 1/24th scale German Motorcycle Zündapp KS750 with Sidecar. In case you forgot, this is item 24-004.

Tasca has found a home at [www.tasca-modellismo.com](http://www.tasca-modellismo.com) where they also showcase other nifty lines like Kamizukuri, Adlers Nest and Shinsegumi. In the U.S., Pacific Coast Models ([www.pacmodels.com](http://www.pacmodels.com)) is the top hot dog when it comes to distribution.

## Trumpeter

Trumpeter has been a standout for years when it comes to having the guts to put out big kits. A lot of people are taken by their 1:16 scale King Tiger. There is rumor on the wind of this coming our way: 915, 1:16 Soviet SU-100, TBA.

Four new variations of their moderns U.S. cargo trucks are in the chute: 1007, M1083 FMTV Standard Cargo Truck, TBA; 1008, M1083 FMTV Armored Cab, TBA; 1009, M1083 LMTV Armored Cab, TBA and 1010, LMTV Trailer, TBA.

They are giving the Cougar the same treatment, too: 1501, Canadian Cougar 6 X 6 APC, \$35.95; 1502, Canadian Grizzly 6x6 Armored Personnel Carrier (APC), \$35.95; 1502, Canadian Grizzly 6x6 Armored Personnel Carrier (APC), \$35.95 and 1506, Canadian Husky Maintenance Recovery Vehicle Improved Version, TBA.

All this is well and good, but the thing that's really catching our interest is the crapload of Soviet/Russian stuff that no one else has the guts to touch: 1528, Russian BMP-3 Infantry Fighting Vehicle (Russian Army), \$46.95; 1531, Russian BMP3 Infantry Fighting Vehicle (United Arab Emirates), \$43.95; 1532, BMP-3 IFV (UAE) w/ ERA Tiles and Combined Screens, \$43.95; 1542, Soviet BTR 60P Armored Personnel Carrier, \$49.95; 1544, Russian BTR-60PB Armored Personnel Carrier, \$53.95; 1578, Soviet T-64A Mod 1972 MBT, TBA; 1581, Soviet T-64B Mod 1975 MBT, TBA; 1582,



Russian BTR-50PK Amphibious Armored Transporter, \$43.95; 1588, Russian ASU85 Airborne Self-Propelled Gun Model 1956 Tank, \$43.95; 1589, Russian ASU85 Model 1970 Tank, TBA; 1590, Soviet BTR-70, TBA and 1591, Russian BTR40 Armored Personnel Carrier, TBA.

Trumpeter is still in the WWII game though, ladies. New releases from that era include: 1565, Soviet KV-8 Heavy Tank, \$53.95; 1577, Pz.Kpfw. 38(t) Ausf. E/F, \$37.95; 1586, German Krupp/Ardelt Waffenträger 105mm leFH18 Tank Destroyer, \$48.95; 1596, German Stug E-100 Super Heavy Tank, \$67.95; 1598, German Krupp/Steyr 88mm PaK 43/3 Waffenträger; Weapons Carrier, \$58.95; 2315, Soviet ML20 M1937 152mm Howitzer, \$47.95; 2316, Soviet A19 M1931 122mm Artillery Gun, TBA; 2317, German 12.8cm Kanone 43 bzw44 (Krupp) Gun, \$54.95; 2321, Soviet NKL-26 Armored Aerosan, \$23.95; 2322, Soviet RF-8 Aerosan, \$10.95; 5523, German 12.8 cm Pak 44 Waffenträger Krupp 1 Weapons Carrier Tank, \$67.95; 5524, German Jagdpanzer 38(t) Hetzer "STARR" Tank, \$53.95; 5528, German Neubaufahrzeug (new construction) Rheinmetall Tank, \$67.95; 5531, German Sdkfz 6 5-ton Medium Halftrack Personnel Carrier, \$64.95 and 5532, Sd.Kfz. 6 with 3.7cm Flak 37 auf Selbstfahrlafette, \$61.95.

Trumpeter is distributed in the U.S. by [www.stevenshobby.com](http://www.stevenshobby.com)



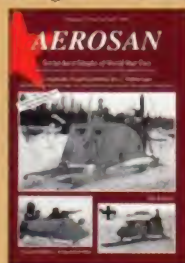
## Tankograd

We would like to take the time to thank Jochen Vollert of Tankograd for blessing us with a deluge of great titles.

The coolest thing rolling off of the Tankograd press these days has to be their "In Detail" series and they have added two new titles: **Tankograd In Detail – DRAGON WAGON Tank Transporter** M25, €22.00.

There has been a lot of emphasis on modern subjects from this publisher in the other releases. For example, 3016, LVP7 - AAVP7A1 The Amtrac of the U.S. Marines - Development, Technology, Operational Use, €14.95; 4016, PANZER II History – Technology – Variants – Combat, €14.95; 5029, Modern German Army Rocket Artillery - HONEST

JOHN - SERGEANT - LANCE - LARS 1, €14.95; 5030, LARS 2 - MARS Modern German Army Rocket Artillery, €14.95; 5031, GECON-ISAF Wüstentarnung Desert Camouflage of the Vehicles of the German ISAF Contingent, €14.95; 7020, MAGYAR HONVÉDSÉG - Vehicles of the Modern Hungarian Army, €14.95; 7021, JGSDF Vehicles of the Modern Japanese Army, €14.95; 7022, Exército Português Vehicles of the Modern Portuguese Army, €14.95; 8003, CV 90 Swedish Infantry Combat Vehicle CV 90 - History, Variants, Technology, €14.95; 8004, CV 90 International - In Service with Denmark, Norway, The Netherlands,



Switzerland and Finland, €14.95; 8005, Finnish LEOPARDS The Finnish Army Leopard 2 A4 MBT, 2R AEV and 2L AVLB, €14.95; 9016, Modern British Army Tank Transporters, €14.95; NVA-02, Military and Paramilitary Vehicles and Weapons of East Germany, €9.90 and NVA 03: Military and Paramilitary Vehicles and Weapons of East Germany, €9.90.

Don't forget to catch up on their quarterly journal, Militärfahrzeug. They sell for €8.95 each.

Last but not least is that cool Russian WWII snow sled thingy: 2010, AEROSAN, €14.95. The best way to load up on Tankograd is to order directly through their website at [www.tankograd.com](http://www.tankograd.com)



## Verlinden

A resurgent Verlinden Productions has been blitzing the hobby world with new releases as they relentlessly scramble back to the top of the after-market heap. If you don't see something in this monster list that you want, you may want to take up birdwatching: 2622, Forklift, \$36.95; 2623, Ontos Interior, \$29.95; 2624, German Tank Riders, \$15.95; 2625, Ontos Stowage Vietnam War, \$22.95; 2626, French Advertising Column, \$16.95; 2628, German WWII One Man Shelter and One Battle Damaged, \$26.95; 2629, British Airborne Arnhem, \$15.95; 2630, British Shermans Firefly Stowage - Ammo - Crew, \$29.95; 2632, Panzerwerk Grinders & Welder, \$19.95; 2633 M7 Priest Ammo and Stowage, \$21.95; 2635, Bombed Dockside, \$19.95; 2637, Der Panzerknacker, \$15.95; 2638, M113 Stowage Vietnam, \$22.95; 2640, The Farm WWII Honey wagon, \$35.95; 2641, US



head set (11) Iraq-Afghanistan, \$15.95; 2642, The farm WWII Dead Cows, \$22.95; 2643, German Ruined Old Building WWII, \$26.95; 2644, Sherman M4A3 Engine & Compartment (Tasca), \$32.95; 2645, Israeli Sherman Moving Practice Target, \$34.95; 2646, News Crew Iraq - Afghanistan, \$15.95; 2647, M151 Mutt War Wagon Vietnam, \$27.95; 2648, Panzerwerk Tiger I Production Stage 1 Basic Hull, \$44.95; 2649, The Road to Siberia, \$22.95; 2652, The Siegfried Line Modular Dragon Teeth Line, \$31.95; 2653, Siegfried Line Roadblock (Gate), \$29.95; 2654, Ardennes Farm House, \$59.95; 2655, T-69 Conversion (Tamiya), \$49.95; 2656, Farmyard Stuff,



\$21.95; 2658, Iraq-Afghanistan Firepower, \$16.95; 2659, Modular Trench System, \$32.95; 2660, The Farmyard Plow, Wheelbarrow, Grinder, \$21.95; 2661, Panzerwerk Scrap Corner, \$24.95; 2662, Bunker Shelter Interior Stuff, \$29.95; 2664, Waffen SS Uniform Insignia Decal, \$11.95; 2663, Wehrmacht Uniform Insignia Decal, \$11.95; 2665, US Recon WWII, \$16.95; 2666, US Tanker Heads WWII, \$12.95; 2667, Trench System II Sections W/ Observation MG Post, \$32.95; 2670, Bunker/Shelter - German Interior Acc. Command Post, \$29.95; 2671, Wooden Foot Bridge, \$29.95; 2674, Pz I Turret Bunker Bombed, \$34.95; 2675, Japanese Shrine Pacific War, \$32.95; 2677, Flieger! German Tank Crew, \$22.95; and 2678, Seal Team, \$16.95.

These guys are back in a big way. Visit them on the web at [www.verlindenonline.com](http://www.verlindenonline.com) and find out what's new all day, every day!

## Voyager Model

Voyager's output is simply incredible lately. They recently sent us a huge sample package. There was a lot of modern flavor in there with a peppering of good old WW2 thrown in.

We'll start off with some of the WW2 sets. Some of these are brand new while others are for kits that have been out a while: PE35252, WWII British Churchill Mk. IV Infantry Tank Basic; PE35322, WWII German Sd.Kfz. 250/9 NEU "Recon (Dragon); PE35330, WWII German Schwimmwagen Type 166 (Tamiya); PE35356, WWII Finnish Army Stug II Basic (Tamiya); PE35389, WWII German Steyr 1500A Kommandeuwagen (Tamiya) and PE35375, WWII US M7 Priest Mid



Production w/ Ammunition Case/ Telephone Set (Dragon). The combined sets leave almost nothing from the kit: PE35367, WWII German 75mm PaK 40/4 auf Steyr RSO Basic (Dragon); PE35368, WWII German 75mm PaK 40/4 auf Steyr RSO Driver's Cabin (Dragon) and PE35369, WWII German 75mm PAK40/4 auf Steyr RSO Fighting Platform w/ Ammo (Dragon).

As for modern topics, they have: PE35383, Modern Swedish CV9040B Infantry Fighting Vehicle (Academy); PE35399, Modern Canadian LAV-3 TUA (Trumpeter); PE35401, Modern USMC HUMVEE M1114 Frag5 w/ Smoke Discharger (Bronco); PE35402, LAV-25 SLEP (Trumpeter); PE35403, Modern Russian BMP-3 MICV w/ Slat Armor (Trumpeter); PE35404, Modern Russian BMP-3 MICV ERA



(Trumpeter); PE35406, WWII German VK1602 Leopard (Hobby Boss); PE35411, Russian/ Poland PT-76B Amphibious Tank (Trumpeter); PE35412, Chinese PLA ZTZ 96 MBT Basic w/ Smoke Discharger (Hobby Boss); PE35413, IDF Merkava Mk.IV LIC MBT w/ Chains and PE35414, IDF Merkava Mk.IV LIC MBT Side Skirts (Academy).

Last but not least are the barrel sets: VBS0160, Modern Canadian LAV-3 Turret Weapon Set; VBS0161, Modern Australian ASLAV-25 Turret Weapons Set; VBS0162, Modern US LAV-25 Turret Weapons Set and VBS0156, Modern Russian T55 Barrel.

Take a closer look at anything that may interest you from this list by visiting [www.voyagermodel.com](http://www.voyagermodel.com) on the web.



two: 35.2319, Churchill stowage No.2, €15.50; 35.2330 Merlin Engine And Gear Box (Cromwell, Comet, Centurion), €25.50; 35.2333, 0.30 & 0.50 with box shields for IVT (ETO or PTO), €19.50. 35.1133, Sherman CRAB, €75.00; 35.1191 Sherman CRAB (full kit), €165.00; 35.1220, WASP Mk II C (Tamiya), €69.00; 35.2338, Medical Supplies (UK), €32.50 and 35.5623 Welkom in België Carrier Crew and Belgian soldier, BEF 1940, €37.50.

### Ultracast

Our buddies from north of the border took a short break from their airplane stuff to bring us another exquisite 1:35 scale figure: 35052, SS Tiger Tank Commander 1944-45, \$12.95 CDN. The figure is multi-pose and comes with two heads and five arms. Don't put them all on at once. You can order direct at [www.ultracast.ca](http://www.ultracast.ca)

### Zvezda

The boys over at Dragon USA ([www.dragonusaonline.com](http://www.dragonusaonline.com)) have been doing a really nice job of keeping us updated on Zvezda. The latest news is three figure sets and a wood cab version of the L4500 truck: 3619, Soviet Paratroops Afghanistan 1980-1988 6 Figures, \$14.95; 3520, Soviet Naval Infantry WWII, \$14.95; 3621, German Volkssturm, Berlin 1945, \$10.95 and 3647, German

Truck L-4500 "Einheits fahrerhaus," \$39.95. Zvezda's truck kits come complete with new car smell. Zvezda also released a bunch of stuff in

1:72 and 1:100 scale recently and small scale enthusiasts should really take a closer look by surfen' on over to [www.zvezda.org.ru](http://www.zvezda.org.ru)

will be implanted in your brain just by looking at the cover. Looking inside will want to clear your bench and start right away. Even with all of the photos, there is still room in here for an extensive textual gloss on the German maintenance system. There is a full dose of German terminology and acronyms here to geek out to as the author goes into extensive detail from the pre-war system right up to the end. You could really write a book about this book. Let's keep it simple. If you love Panzers and Panzer books, find a spot on your shelf for this one. Thanks to Panzerwrecks ([www.panzerwrecks.com](http://www.panzerwrecks.com)) for the review copy.

### Campaign 229: Kohima 1944

By Robert Lyman

Osprey Publishing

Soft Cover 96 Pages B&W with Color

ISBN 978-1-84603-939-3



FIRST OF ALL, WE WOULD LIKE TO thank Osprey for sending us all the great books. They send us so many that we could not possibly review them all without excluding everyone else.

Aside from the *Men-at-Arms* and *Vanguard Series* that provide such invaluable reference, the Campaign Series is a definite favorite here at Ampersand world headquarters. With that out of the way, let's get to the review. *Kohima 1944* is a concise summary of the

decisive battle in the China-Burma-India Theater during WW2. In 1944, Japan was in retreat in the Pacific, but still had a pretty good strategic situation in South Asia. Their plan for the spring of 1944 was to invade India via Burma. This plan failed at Kohima, where the British stopped them cold. The subsequent Japanese defeat and retreat caused a collapse in the entire theatre of operations. The book follows the usual Osprey outline we have seen in other volumes of the Campaign Series. It gives a background followed by the structure and plans of the opposing forces. The battle is then covered in detail along with the aftermath. Robert Lyman does a really good job of laying all the details out for you within Osprey's format. There are enough maps accompanying the text to make following events easy. Period photos and some nice illustrations give you a feel for the battle conditions in your mind's eye. *Kohima 1944* covers a decisive battle from the China Burma India Theater of WW2, a chapter of the war often forgotten or glossed over. All fans of history should enjoy this book.

Check out Osprey's full catalog at [www.osprey-publishing.com](http://www.osprey-publishing.com)

### Czech Wheeled Self-Propelled 152MM Gun-Howitzer DANA

By Jochen Vollert

Tankograd Publishing

Soft Cover 96 Pages Full Color



JOCHEN VOLLETT FROM Tankograd bombards us with new books, too. Thanks, Jochen!

The DANA is arguably the baddest truck ever produced.

Other trucks may haul heavy loads, but this thing is armed with a 152mm

howitzer for Pete's sake. The Czechs produced the DANA back in the bad old days of the Cold War between 1980 and 1994. The design is based on the Tatra 815 eight-wheeled truck.



A grand total of 794 were built. It was deployed by the Czech army and successfully

exported to several

countries. The DANA has been available in resin for a while and a plastic kit is now on the shelves, making this book very timely and relevant. There is a short textual introduction to give you a feel for this monster and a comparison to other designs of this type. From then on it's photos, photos, and more photos—all in full color. Shots from different time periods in the vehicle's service life are there to give you ideas for paint schemes. There is no skimping on detail shots either. Yes, there are interior shots too. Captions provided in the photos are very informative. There is even coverage at the very back of a DANA version called the ZUZANA designed with a 155mm howitzer that fires NATO ammo. This is a perfect reference for anyone modeling this monster, or just interested in modern armor in general. Order any of Tankograd's titles direct at [www.tankograd.com](http://www.tankograd.com)

### The Nordic Edge Model Gallery Vol. 3

Canfora Grafisk Form & Forlag

Soft Cover 144 Pages Full Color

ISBN 978-91-96733-3-2



FOR STARTERS, CANFORA SHOULD be congratulated for consistently assembling some of the very best military modeling subjects into the Nordic Edge books. If you own one volume, chances are you will want the others. Like the

other editions, volume three of this series concentrates primarily on WW2 military vehicles, figures and dioramas. The vehicle gallery contains a nice selection: a

King Tiger, M2A1 Halftrack, Hetzer, SdKfz. 234/1, Renault UE with 37mm PaK and a Churchill MkIII. The figure section contains an article on creating vignettes, a 101st airborne figure, a U.S. Marines vignette and busts of a Scottish paratrooper and a scratch built Finnish tanker.

For the first time in the series, there is a focus on subjects from 1:48 and 1:72 scale. Tamiya's 1:48 scale Panther, Firefly, U.S. M4 Sherman and Tiger show up here to good effect. There is a 1:72 scale diorama of a JSU-122 in here too. The last third of the book moves on to some very nice dioramas. An RSO with PaK that garnered a lot of attention at Euro Militaire is featured here followed by a German Hotchkiss Panzerjäger. Perhaps the most unique subject of the book is Ulf Blomgren's sinking ship diorama titled Schiffstratten. A really nice ruined cityscape, a T-34 in deep snow and a burned out Panzer IV diorama round things out. It's nice to see more how-to in Volume three as some of the more advanced techniques used are highlighted. The attention to scales other than 1:35 is notable, too. The Nordic Edge books are great entertainment for the whole family and you can get yours direct at [www.canfora.se](http://www.canfora.se)

# Book Reviews

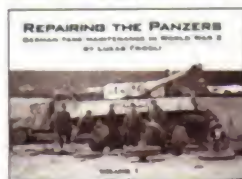
## Repairing the Panzers

By Lukas Friedli

Panzerwrecks

Hard Cover 256 Pages B&W

ISBN 978-098418202-2



PANZERWRECKS NOW HAS a book about how the Germans tried to keep their Panzers from becoming Panzerwrecks. Outstanding! But seriously folks, this is a

great overview of the German maintenance system for their vehicles in WW2. Let's

start with the photos. There are 296 of them stuffed into this 256-page book. The seeds of a maintenance diorama idea





### British Infantry Tank Mk. III Valentine Part 1

By Dick Taylor

Model Centrum Progres

64 Pages B&W

ISBN 978-83-60672-13-6



MODEL CENTRUM IS STILL GOING very strong on the whole British/Commonwealth thing.

Since Mini Art has whipped out a couple of Valentines lately, this book is particularly relevant to anyone taking a crack at those kits. The Brits produced more Valentines than any other type of tank. There were 11 different versions (marks) and also deriva-

tives such as the Bishop self-propelled gun, Archer tank destroyer, a bridge layer, mine flail and Duplex Drive version. A lot of these were pawned off on the Russkies as part of Lend-Lease, too. This book is part one of two books and it concentrates on the 2pdr. gun tanks in particular. There is a short but sweet intro that covers the development and the different versions before the author plunges into the gobs of period photos that make up the bulk of the book. Modelers will not be at a loss as to the details of their particular mark as there is plenty of coverage of the different versions on different fronts. As usual for a book from this great little publishing house, line drawings, pages from the original tech manual, and color plates (five pages) are all provided. If you are serious about your Valentine, don't pass up this book. Our thanks go out to the publisher for the review sample. Look them up today at [www.modelbooks.republika.pl](http://www.modelbooks.republika.pl)

### Magach 6B GAL and Gal Batash M60A1 in IDF Service Part 2

By Micheal Mass

Desert Eagle Publishing

Soft Cover 82 Pages Full Color

ISBN 978-965-91635-0-2



MICHAEL MASS AND DESERT EAGLE have been throwing out very nice titles on Israeli armor for a while now that are unmatched in quality on the subjects they cover. This new title, which is a continuation on *Desert Eagle No. 1*, is no exception. The book picks up where part one left off with more coverage of the Magach 6B GAL, the upgraded Israeli version of the venerable U.S. M60

main battle tank, equipped with a reactive armor suite and other upgrades. From there it moves on to the Gal Batash. This version contains an upgraded reactive armor suite among other improvements. There is a short introduction to this version followed by in action photos and a section devoted to detail shots. Markings are covered too. A section on two different bridge layers and the M88 in Israeli service

that has a bar armor array are also here. Finally, a very nice modeling project based on the Legend Productions conversion for the Gal Batash rounds things out. Israeli and modern armor fans will really dig this one, especially those out there looking to do a scale version of what has to be the neatest looking M60 ever. Desert Eagle titles are all at [www.deserteagle-publishing.com](http://www.deserteagle-publishing.com)

### Lion & Lioness of the Line Vol. 5

The First IDF Sherman Tanks

By Dr. Robert Manasherob

Sabinga Martin Publications

Soft Cover 80 Pages B&W with Color

ISBN 978-0-9841437-2-6

### Lion & Lioness of the Line Vol. 6

Early IDF Sherman Tanks

By Dr. Robert Manasherob

Soft Cover 80 Pages B&W with Color

ISBN 978-0-9841437-3-3



WE RECEIVED BOTH OF THESE books from Sabinga Martin at once. We figure that if you want one of these titles, you'll probably want the other one too, so this will be a double review. *Lion and Lioness of the Line Volume*

*Five* covers the first four Shermans used by the IDF ever in minute detail. It starts out with a background that fills you in on how hard it was for the Israelis to acquire weapons when the state was

born. Then it gives you an in-depth story on the four named Shermans: Meir/Mania, Tamar, Rut II and Ada. The textual story gives you a good feel for the obstacles that were overcome not only to acquire these tanks but also to get them operational and

keep them that way. It also details the operational life of each vehicle. Along the way, there are lots of period photos for those who want to model the particular vehicles. The back part is an extra juicy treat for all Shermanolics with lots and

lots of detail photos from tech manuals and full color shots of many details including the transmission, the Wright R975 engine, and VVSS bogies. There are line drawings and color plates of the four

subject vehicles too.

Volume Six of the series picks up where the previous volume leaves off. During the years 1949-50, Israel struggled to expand its fledgling Sherman fleet. It's an interesting story and we believe you will want to read it for yourself. The text talks not only about the Shermans but about the changes in the Israeli armor force structure during the time. This installment of the story also includes a great treasury of period shots and line drawings. In the back of the book is a full color walk around of an M4 from Latrun. There are nice color plates in there too and a gloss on markings. Both of these books are great

stuff if you are a fan of Israeli armor or nuts about Shermans. Special thanks go out to Dr. Rob (Manasherob) for the review copies. You can now order Sabinga Martin books direct by going to [www.sabingamartin.com](http://www.sabingamartin.com)

### Dampflok BR 86 Train in Detail No. 2

By Frantisek Koran et al.

Wings& Wheels Productions

Soft Cover 144 Pages Full Color

ISBN 978-80-86416-90-8



IF YOU ARE SEARCHING FOR REFERENCE for your Trumpeter (or CMK) BR86 locomotive, look no further. WWP has taken a special interest in the subject of German locomotives lately. This book is everything that we have



come to love from this publisher with page after page of big, beautiful full color walk around photos. Two different surviving examples (one mid and

one late) are used in this book to give you all of the details you would ever want to add to your model. A walk around of the late series is done first and then there is a walk around of the mid series example. Small sections with attention to specific components come next. After that, special treatment is given to cab interiors. The backend of the book contains a nice profile of a fully built CMK kit and three pages of color plates from specific examples. There was a lot of love put into this book by the publisher himself, Frantisek Koran, and it really shows. Special thanks go out to him for the review copy. You can visit WWP on the web at [www.wwpbooks.com](http://www.wwpbooks.com)

### Panzerwrecks 11: Normandy 2

By Lee Archer and William Auerbach

Panzerwrecks

Soft Cover 96 Pages B&W

ISBN 978-098418203-9



Our good buddies at Panzerwrecks ([www.panzerwrecks.com](http://www.panzerwrecks.com)) have sent us another great installment in this



series. They pick up where things left off in PW8 with the Normandy theme again. Two of the photo essays in here (Wrecks at Treviers and Scrapyard Panzers) were taken at Allied collection points and give a nice survey of different equipment. Two other essays, Unrecovered Bergepanther and Normandy-Puma Country, concentrate on particular vehicles. To us the highlights of this edition are the gobs of great Panzer IV shots and photos of 38(t) based vehicles, as well as some of the weird French stuff that was used in Normandy. There is also your usual ration of Tigers and Panthers. Landscape shots inside both the front and back covers are an added bonus and a nice creative touch. Panzerphiles everywhere will really dig this one along with all of the others in this series.



# HERCULES! MY HERCULES!

An examination of the M88A2 tank retriever

by David Doyle



**T**he M88 family has been the backbone of the US Army's armored recovery fleet for five decades, with the first production contract awarded in 1959. However, when the U.S. Army began fielding the M1 Abrams tank in 1980, the M88 found itself faced with all it could handle in terms of burden. With a weight in the 70-ton range, using two of the M88A1 retrievers to tow a single Abrams was standard operating procedure, largely due to braking concerns.

Accordingly, in August 1986 efforts got underway to upgrade the venerable retrievers in order to handle the latest main battle tank. The result of this initiative was a significantly modified and rebuilt vehicle. The improved retriever was temporarily shelved in order to provide funding for the M109A6 Paladin howitzer, but work on the retriever was subsequently restarted in 1991 as the M88A1E1 Improved Recovery Vehicle. This vehicle was type classified as standard in 1997 under the designation M88A2 Heavy Equipment Recovery Combat Utility & Evacuation System, or HERCULES.

A program was begun whereby the Anniston Army Depot would strip down M88A1 vehicles and modify the armored hulls to new specifications. The modified hulls were then shipped to BAE Systems of York, Pennsylvania where they formed the basis of the new M88A2 vehicles. It is anticipated that the M88A2 will serve U.S. and allied armies for decades to come.

**LENGTH:** 12 feet, 2 inches (8.58 meters)  
**HEIGHT:** 10 feet, .25 inches (3.12 meters)  
**WIDTH:** 12 feet (3.65 meters)  
**WEIGHT:** 70 tons (71.12 metric tons)  
**SPEED:** 25 mph w/o load; 17 mph w/ load  
**CRUISING RANGE:** 200 miles  
**BOOM CAPACITY:** 35 tons  
**WINCH CAPACITY:** 70 tons / 670 ft  
**DRAW BAR PULL:** 70 tons  
**ARMAMENT:** One .50-caliber machine gun  
**POWERTRAIN:** Continental AVDS-1790-8DR 12 cylinder, 1050 hp air-cooled diesel engine with Allison XT-1410-5A 3-speed automatic transmission  
**CREW:** 3





1. This view of an M88A2 exhibits the revamped side and frontal armor of this model. New for the M88A2 is a more powerful, constant-pull main winch with a capacity of 70 tons, and an externally mounted, hydraulically powered auxiliary winch at the center of the glacis for paying out the heavy main-winch cable. An extension of the top of the side armor gives protection to the 35-ton boom when retracted. 2. Details of the spade assembly, three front tow shackles, and the M239 smoke launchers are visible. Below the auxiliary winch is the front end of the main-winch cable, enclosed in the level winder, a device that properly winds the cable onto the winch drum. Above the glacis are the driver's and mechanic's cupolas. 3. The rear end of the M88A2 is similar in layout to that of the M88A1. A tow bar complete with grab handles is clamped in place, below that is the combat tow chain with its large tow ring. Above the tow bar is the exhaust deflector. On the vehicle's rear deck are two raised exhaust shrouds, equipped with louvers. 4. The rear of the right side of the hull features a pioneer tool rack with a perforated, hinged cover (center of

photo). Above that rack is the right stay-line arm for the boom, with the right boom stay line pinned to it. Parts of the armored side skirts, introduced with the M88A2, are visible at the bottom of the photo. 5. The M88A2 includes a redesigned, two-panel side door on each side of the crew compartment (center). A step is cut into the armored skirt below the door. Aft of the door is an oilcan on its stowage rack. Aft of that is the louvered door for the auxiliary power unit (APU) compartment. Resting in the rack toward the right is a 140-ton snatch block. 6. The side profile of the front of the M88A2's hull was significantly different from that of the M88A1, owing to the overlay armor on the front and sides of the vehicle. The M88A2 retains the front spade found on its predecessors, seen here in profile to the right. Three spare track links are stowed on the right side of the hull of the M88A2 toward the front of the vehicle. 7. Above the drum of the hydraulically powered auxiliary winch are cable rollers, with the eye of the cable sticking out from them. To the right of the drum is the hydraulic winch motor. Below the auxiliary winch drum are lifting eyes,





used when removing the main winch cover. Note the armored hoods welded to the frontal armor over the driver's and mechanic's vision blocks, and the amber warning light at right. **8.** The left front corner of the hull. The main tow cable shackle protrudes from the cover of the level winder, toward the lower left. Above it, the side of the auxiliary winch motor is visible. The headlight assemblies and brush guards are the same as on the M88A1. The notch on the top front corner of the side overlay armor on both sides of the vehicle allows access to the pivot pins of the boom. **9.** The armored skirts are hinged for ease of access to the suspension and track components. Two rectangular openings intended as crew steps are incorporated into the skirts. To the left, the loop of a tow cable is secured in a bracket. Each spare track shoe is secured to the side of the hull with a retainer over the track pins on each side; the retainers are fastened with nuts to threaded lugs on the side of the hull. **10.** The auxiliary boom (center) is used with a chain hoist to lift heavy objects (up to 500 pounds) close to the vehicle. To deploy the boom, it is removed from its holder

and placed in one of eight sockets distributed around the hull. Strengtheners are welded on each side of the two bends in the boom. Below the oil can stowage rack to the left is the cover for the remote pull handles for the internal fire extinguisher system. **11.** The external handle at the center of each side door operates a latch mechanism on the interior of the door panel. There is also an operating handle on the interior of each door panel, which also acts to lock the door panel when open. When used to lock the panels open in that manner, pins are inserted into the interior handles. **12.** Aft of the left side door is an oilcan. Note the vertical and horizontal welded seams in the overlay armor. To the right are the clevis ends of the spare tow bar. To the upper right is the boom. Unlike the boom fashioned from steel tubes on the earlier M88s, the M88A2's boom is fabricated from square-sectioned hollow steel tubing. **13.** Each of the tow bars weighs 280 pounds, and the operator's manual advises the crew use the chain hoist and boom when lowering or raising the tow bars into their stowed positions. Below the tow bar is a small door to a





stowage compartment in the side of the hull. **14.** The rear of the crew compartment is to the left, and on the engine compartment deck are several of the engine-air intake grilles. To the lower left is the fuel filler cover. Mounted on the engine compartment cover are the vise and three loop-type clamps for securing an oxygen bottle. **15.** The left stay-line arm is at the center. There is a stay-line arm on each side of the deck. These act on the stay lines to move the boom back and forth during live-boom operations. The tube welded to the side of the stay-line arm's mounting bracket is one of the eight sockets for the auxiliary boom. **16.** The engine-exhaust shrouds, louvers, and deflectors viewed from the left. The braces for the exhaust deflector are notched on the bottom, enabling the deflectors to be set at various angles. The rear service light next to the exhaust shroud is used to illuminate the area to the rear during nighttime recovery operations. **17.** The taillight assemblies are mounted on plates that also allow access to the hydraulic cylinders that power the

stay-line arms. To the left of the taillights is the side-armor extension; note the scooped-out design of the armor at this location. Welded to the hull to the front (in this photo, above) the tail-light assembly is a vehicular lifting eye. **18.** The commander's cupola at the center of the crew compartment roof has a bottom section with six vision blocks and a fully rotating upper ring with a hatch door and .50-caliber machine gun mount protruding to the front of the ring. The cupola rests on a removable plate fastened to the roof. To the right is the driver's hatch door, which includes a periscope and brush guard, and at the far right is the hoist-cable hatch. **19.** At the center of the engine compartment cover is the deck storage tray, for holding a canvas cover and ropes; note the hold-down straps on it. Aft of the boom cross-member with the black stenciling is the 35-ton hook block, shown in its travel position on a special tray attached to the boom. To the right, aft of the vise, is the engine-deck storage box. The tops of the boom pulleys are visible at the far end of the boom.



# Plowin' and a Blitzzen

Scooping up a bunch of updates for Tamiya's Opel Blitz truck



## Blitz Background

**I**n the German 3-ton (or medium) category, the major and most successful design was the Opel Blitz. This was a 1938 design from Opel (the German subsidiary then, as now, of General Motors) and was quite conventional in layout. The Opel Model S3.6-36, to give its maker's designation, was a 4x2 vehicle with pressed steel cab and bonnet along with conventional leaf spring suspension.

During its war production run, there were many special purpose variants produced. Over 100 different types were recorded. Most important of these featured a house-type body (Einheitskofferansbau), which could be fitted as a workshop, laundry, laboratory, command caravan, radio van, cipher office, ambulance, or dozens of other purposes. The box-like house body was made of wood and compressed card, partly for ease of production and to save metal. Late in the Blitz's production life, it was fitted with the famous "ersatz" cab, a wood and pressed card structure known as the "einheits-fahrerhaus," again as a major economy measure when steel became short.

## Construction

Getting straight to it, construction begins with the lower chassis, which I assemble per the Tamiya instructions with only a small deviation to replace the stowage boxes with a new set of photo etched

brass ones from Aber. Tamiya reproduces this kit with the double leaf spring suspension found on later production vehicles, although they provided the early bolt patterned wheels. If you use the kit wheels, then the upper leaf spring should be removed. However, the MIG Productions wheel set has the later bolt design and this eliminates the need for modifications to the suspension.

The MIG replacement wheels feature very crisp molding and make for a nice alternative to the kit parts. However, the mounting holes are very shallow. The quick fix is to drill out the holes and/or shorten the axle ends to achieve the proper fit. I choose to also insert a section of brass rod for added strength.

Continuing along with the instructions, the next steps move onto the crew cab. The basic Tamiya instructions are clear and assembly is straightforward, but once again I deviate from the basic instructions. I spend quite a bit of time dressing-up the cab with Aber brass, while Royal Models resin parts replace the kit's headlights. I also choose to replace the kit's pioneer tools with better-detailed Dragon Models tools from my parts box.

Moving forward, the impressive snowplow is

from Plus Model. I approached this particular part of the construction with some apprehension as it appears very complex from the box top photos. Opening the box to take a peek at the minimalist instructions inside (line drawings) did little to boost my confidence, but once I actually began, I was pleasantly impressed by the logical sequence and sure fit of the parts. The only issue I found is that the Plus Model conversion is designed for the Italeri Mercedes L 3000 kit, so it requires a little fudging on some of the bracket mounting. Nothing too drastic—only a little sanding here and a replacement bolt head there.

The familiar Tamiya rear cargo bed features nice wood grain texture and very inconvenient sinkholes!





**1.** Tamiya has done a decent job of replicating the chassis of the Blitz. Obviously, there is room for improvement, but once the model is complete hardly any of it remains visible. **2.** Everything needed to make the cab. Note that there are some ejector pin marks that need filling on the inner face of the doors. Aber photo-etch parts have been used to detail the driver's foot controls. **3.** Included in the Aber photo-etch set are the two stowage bins that live under the flatbed. These need folding into shape. For extra strength they are soldered. **4.** More of those pesky ejector pin marks festoon the underside of the flatbed and rear fenders. Check out that neat little Opel Blitz badge on the radiator grille graciously supplied in the Aber set. **5.** The front wheels are replaced with later pattern items from the Royal Models detail set. Note the hubs are a completely different pattern. **6.** If you are using the kit wheels, then

the upper leaf spring should be removed. However, I found that the MIG Productions wheel set has the later bolt design, which eliminates the need for any modification to the suspension. **7.** The MIG replacement wheels feature very crisp molding. However, the mounting holes are very shallow. The quick fix is to drill out the holes to achieve a proper fit. **8** and **9.** Tamiya's Blitz is a beautifully engineered kit, but does suffer from some simplifications. Aber photo-etched parts and resin parts from the Royal Models detailing set come to the rescue and add that extra finesse. **10.** Laid out for display, the Plus Model snowplow conversion is actually designed for the Italeri Mercedes L 3000 kit, but will fit with very little modification. **11-12.** The snowplow taking shape. Initially this conversion looks pretty complex and the minimalist instructions (line drawings) do little to boost confidence.

Be prepared to spend a relaxing evening of puttying, sanding and re-scribing the wood grain texture. Here again, the rear cargo area is supplemented with bits and pieces of Aber brass.

## Painting

As coincidence would have it, while working on this project I re-read one of my favorite books, "The Forgotten Soldier." This is a gritty account, which in

part recounts the extreme conditions encountered by the supply troops of the Rollbahn serving on the Eastern Front. The descriptions of hardship, wear and fatigue provide me with ample inspiration for the painting of my workhorse Blitz.

I recently read an article that argued the bluish tones often associated with German Grey might be a misconception. The color is actually based upon brown, or reddish-brown hues. I decide to give this

theory a try and add a brown color to the Tamiya German Grey base color. The result is a very pleasing warm shade of grey. And, although in real life the entire vehicle would have been initially painted with the same color, I figure that over time and especially in harsh conditions the different materials of the trucks body (metal cab versus wooden bed) would weather and fade to slightly different colors. To create this distinction, I add slightly more





**17.** The basic colors are all sprayed on using Tamiya's range of acrylic colors, which are thinned with Tamiya's excellent Lacquer Thinner. The red primer snowplow adds a splash of color. **18.** The business side of the snowplow blade is first painted using Model Master Metalizer Stainless Steel to achieve a nice, polished steel finish. **19.** Following the base color application, a protective coat of Future floor polish is misted on to protect the acrylic camo colors prior to the weathering process. **20.** Before adding the winter whitewash a coat of hairspray is applied. The hairspray is the secret ingredient to creating a realistic distressed finish. **21.** Incorporating a kitchen pad to mask the pattern's edges helps provide a rougher, hand-painted look.



brown color to the mix while painting the cargo bed to get that slightly different base tone.

Of course, any respectable "Snow Blitz" will need proper camouflage in the form of a rough winter white wash. I rely upon the "hairspray method," while also incorporating a kitchen pad to mask the pattern's edges for a rougher, hand-painted look.

Briefly, over the base grey color and a protective



**13.** Due to their logical sequence and sure fit of the parts, the construction of the plow turns out to be straightforward.

**14.** A pin-vice is used to drill out the tie-down eyelets around the lower edge of the MIG Productions tarpaulin casting. **15.** The snowplow, tarp, new wheels and the photo-etch details really turn Tamiya's humble Opel Blitz into an impressive looking

machine. **16.** With assembly complete, Mr. Surfacer 1000 is used to prime the entire model. Not only does this provide a great base for the acrylic colors to adhere to but it also highlights any flaws in the construction process.



stripes over top the layer of hair spray. After about one hour's drying time, I use a small brush and water to scrape away flakes of the white camouflage paint. Finally, I go back over the white with a fine brush and white Vallejo paint and re-apply (or color map) some of the chipped areas to add and refine the detail in the flaked off areas.

I follow with some localized chipping and scratches to the cab's running boards and fenders using rusty brown colors and a scouring pad. Next comes a few light acrylic color washes over all the surfaces to unify the colors. I continue to

coat of Johnson's Future floor polish I mist a layer of hairspray. After letting the hairspray dry for about one hour I go about adding the rough, white

accentuate the different color tones between the cab and wooden cargo area. On the cab, my filters consist of brown and cream colors, while the cargo





**22.** A combination of Tamiya's field grey, JGSDF dark green, buff and flat white is used to replicate the faded-washed out green of the tarpaulin. **23.** Once the white is allowed to dry for about 30 minutes, a brush dipped in water is used to soften the hair-spray and allow patches of the white to be scrubbed off. **24.** Throughout the weathering process, Vallejo White was continuously used to refresh the white camouflaged areas if they became too discolored by the oils. **25.** Abteilung 502 oil paints have been

used to accentuate the panel lines and wood grain effect on the cargo body. **26.** More oil paints are used to accentuate details on the tarpaulin, these oils are also great for adding stains, streaks and, shadows and highlights. **27.** To add a build-up of snow and ice I use MIG Productions Ashes White pigment mixed with MIG Productions acrylic resin as the base and then added micro balloons.

bed is filtered using a little touch of green in the base color mix.

The next phase of the weathering process is the familiar back and forth process of adding detail and depth to the finish. MIG Productions 502 Abteilung artist's oils are used to add depth, define details, and additional color tones to the finish. Again, I tried to vary my color choices to emphasize the subtle color variation between the metal and wooden surfaces. Throughout the process my bottle of Vallejo white continues to be used to refresh the white camouflaged areas if they became too discolored by the oils.

For a little added color (and to have some fun) I decide to paint the mounting brackets for the snowplow in rusty metal colors. Base colors are applied using Tamiya and Vallejo acrylics with the finishing touches made using the 502 Abteilung artist's oils and MIG pigments. The business side of the snowplow blade is first painted using Model Master Metalizer Stainless Steel to achieve a nice, polished steel finish. To weather the metal finish I first moisten the blade with tap water and then apply a fairly heavy layer of salt, especially over the lower blade. To the upper areas I spray light areas of brownish rust colors to replicate surface blemishes and stains. I apply light washes of MIG pigments dissolved with enamel thinner to further discolor the surface.

Finally, I decide to try and replicate light snow build-up on the more exposed areas of the vehicle; wheels, plow bracket, front bumper and tarpaulin. For this I use MIG Productions Ashes White pigment mixed with MIG Productions acrylic resin as the base and then add glass spheres (or micro balloons) for a topical sparkle. In certain areas, I muddy-up the snow by applying thin washes of earthen artist's oil colors.



### Concluding thoughts

Somewhere in the shuffle of all of the aftermarket extras there is the Tamiya Opel Blitz. My impression of the kit is much like that of the Blitz itself; nothing too fancy but it serves its intended purpose well. Adding the Plus Model snowplow certainly makes the "ordinary" Blitz into something quite unique and impressive. Images created

though reading can invoke emotions often not felt by simply studying photographs. Attempting to capture these emotions in your work brings new challenges—and opportunities. I would like to acknowledge Jeff Kleinhenz who contributed by doing preliminary construction before handing the project off to me. Thanks!

—Rick Lawler

## MMiR RECCE

Tamiya Opel Blitz. Kit number TAM35291.

Plus Model German Medium Snow Plow type - K. Kit number 240.

Aber German Cargo Truck Opel Blitz. Set number 35 227.

Archer Fine Transfers Opel Blitz instruments, placard, and details. Sheet number AR35291.

MIG Productions Opel Blitz wheel set for Italeri and Tamiya. Set MP 35-122.

MIG Productions Opel Blitz Tarp for Tamiya kit. Set MP 35-170.

Royal Models Opel Blitz detail set. Item RYMRM092.

### References

Opel Blitz in Detail - #39, Wings & Wheels Publications, ISBN: 80-86416-51-8



# The Mighty Antar: who



*"And verily you have occupied in my heart the place of the honoured loved one, so do not think otherwise than this, that you are my beloved."*

—Antara ibn Shabbad / Poem of Antar

**H**aving been a fan of really big ugly trucks since I was five, there are a few that I always wanted to build. Some of you share that same warm feeling in your gut as I, but whether the plastic gods will look down and reward us—well, sometimes we're left high and dry. The dark lord of resin heeds our wishes for the unobtainium, but at a price. When a certain rig is announced, you can hear the rumblings on the Internet: How much? Which variant? How do I hide it from the missus?

Accurate Armour has continually stepped up and dropped huge plates of meat and potatoes for us truckavores regardless of what the market wants. Now behold two big boxes of post-war diesel spewing and tank-carrying resin bliss: the Thornycroft Mighty Antar and Dyson 50T Drawbar Trailer.

The Antar was the first all-English post-war truck specifically designed for transporting medium and heavy tanks. Developed in 1949, a Rolls Royce Meteor engine powered the Thornycroft Mighty Antar 6x4 tractor and at the time, it was the largest tractor to come out of the UK. It was originally developed to haul steel pipes across the Iraqi desert, but by the early 1950s, it had transi-

tioned from its civilian role and taken over all the British Army's heavy hauling tasks.

Basically, the Antar is a mongo-huge version of a Diamond T. The Antar's companion trailer is the Dyson 50-ton ramp-up flatbed. Both the truck and trailer coupled together are a big, British version of the M20 from WW2. More power and greater load capacity is the name of the game. Developed later were both the Mark II and III versions with fifth wheels and heavier lowboy trailers to cope with those nutty post-war super heavy tanks. These massive combos worked well and hard for the British Army all the way into the 1980s, at which point the Scammell Commander took over all tank-hauling duties.

## Happy trailer

The trailer first? What? Are you mental? I am, so that's where I begin: with the DYSON 50-ton Drawbar Trailer FV3601 Mk-1. I do this because the trailer has to have the basic form so I can start planning my cargo for it. Going over the parts, I dig the new casting quality that Accurate Armour has put into this kit. I have built a lot of Accurate Armour kits, so when there is change I see it. Everything is crisp and sharp. The tires, all 34 of them, have excellent tread detail, and the rims are spot on. The main deck is a masterpiece: straight, flat and true, with minimal mold flash. I go through all the parts and start the removal of the pour gates and then proceed with the cleanup. About two hours later, I have all the major parts ready.

The instructions start with the wheel bogies and I assemble all four at this time. These parts are meant to articulate, so I make sure everything is workable and free of any sloppy wobble. The bogie beams are the same for the front and back. I place them into the right and left rear station and they are secured by the spar support end caps. I double-check that everything is still workable, and move to the front turntable. This part is what allows the trailer to turn, and it is connected to the lead truck via an A-frame draw bar. I install the pins to hold the draw bar in place and also test fit the front axle beam (#5) into the channel on the turntable. It is here that I notice a slight mold shift on part 5, luckily it is on the side that doesn't show, but it must be placed a certain way for the alignment of the axle pins. Underneath the axle is the turntable pin that centers the turntable to the deck. I assemble all the remaining bogies to the axle beam and secure them with the front axle bearing.

I refrain from gluing the axle to the turntable, so I can paint it as a separate unit. I add both the turntable travel stops to the raised weld bead on both sides of the bottom deck. I move to the center of the trailer and add the easy bits first: the stowage locker and the spare wheel bracket. I leave off the spares until after painting but assemble the entire spare wheel rack. I also add the spare wheel lock pin to the bottom of the deck—it centers part 18.

The trailer brake system consists of three resin parts: the hand wheel, park brake bracket, and



# Even ugly is a good thing

## Tony G gets large with the AA resin kit



brake pivot bar. These are connected to each other with brass rods. I leave off the carry up for the spare wheel holder until after painting but install the spare wheel handle in position.

Moving to the front of the trailer, the v-neck and both tool lockers are added to the front deck. The front fairlead is placed in between the v-neck along with the front vertical fairlead. The right front tool locker gets a bridging disk and the left toolbox receives two photo-etch chains. I drill two holes into the deck underneath the horizontal fairlead to place my trailer brake cables later. Exact placement is not clear in the instructions because the v-neck obscures it. The other pictures in the instructions do not show the exact placement of this, so I eyeball it.

Each side of the trailer receives five photo-etch reflectors and one sidelight marker. The rear of the trailer gets its two ramps. Each ramp is comprised of the top and the bottom and two photo-etch ramp hinges. It is wise to decide if your trailer will be in transport mode or in loading position before you glue the ramp hinge in place. I try to make my ramps workable, but find that when I glue the hinge in place with the ramps in the up position, they would not sit properly when folded down. The last part of the rear is the photo-etch license plate.

The load deck has four load bed guides that are adjusted to the inner width of whatever vehicle will be carried. I leave these off until my load is brought forth. The turnbuckles that will cinch the load are comprised of six pieces per lashing. I leave the complete assembly off the lashings until I have completed the painting and decided the correct load for the trailer. Based on the vehicle that will be loaded on the top deck, you will have to cut to length both the turnbuckles and chains to properly lash down all four corners. For me, this will turn out to be the hardest part of the build.

### Tough Brit Rails

With the assembly done on the trailer, I now shift to the Antar. This kit depicts the original FV12001 Mk-1 Ballasted version for towing draw-bar trailers. It comes with a full chassis, cab interior, engine, transmission and winch, extensive full color decals, and an etched brass detailing set. The huge ballast body includes ballast weights, davit and all internal/external fittings.

Like the trailer, I move pretty fast through cleanup. I catalogue my parts from the parts list and set aside any broken parts to be dealt with later. Cataloguing parts is crucial on a kit with this many parts to avoid missing parts. With all the

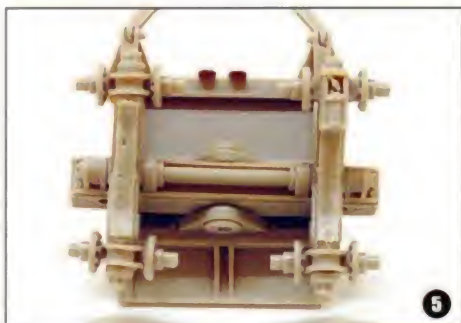
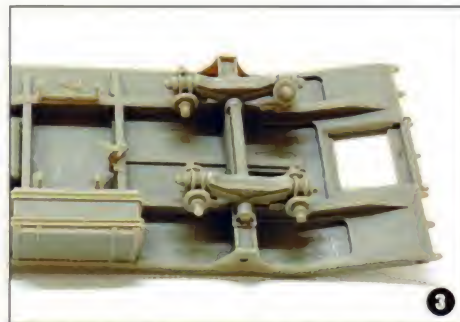
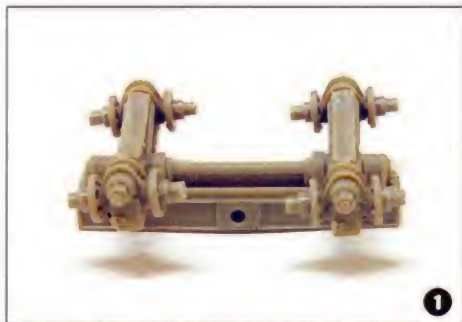
parts for this truck accounted for, clean and pretty, I am ready to build me a big ugly truck!

The frame is a pretty stout casting, and like the trailer, the rails are arrow-straight. The instructions begin at the front of the frame with the steering box and power steering unit. Part 7 is the actual steering box and part 11 is the power steering unit. I leave off both of these linkages until I determine the steering angle of my front wheels. The front steering cannot remain workable due to the complexity of all the steering linkages, so you must decide which way you will position the wheels.

Moving to the front axle, I mount the leaf springs making sure they are straight to the frame rails. The mounting of the spindles to the axle went smooth, as they have a pin to secure them in place. I ran into some problems with incorrectly numbered brake cylinders in the instructions and glued them on in the wrong direction. Argh! But luckily I have found superglue made by LocTite that has a longer workable time before it sets. This is a must for any resin building, and I highly recommend it. Be warned, it is not cheap: \$14.95 for a 1oz. bottle.

This added "oops" time helps me get the flubbed brake cylinders off without damage. I glue them in the proper direction and it is at this point I can





**1, 2** I start with the wheel bogies for the trailer. These parts are meant to articulate, so I make sure everything is workable and free of any wobble. **3** The rear assembly installed. The bogie beams are the same for the front and back. **4, 5** The front turntable is what allows the trailer to turn, and it is connected to the lead truck via an A-frame draw bar. **6** With everything level and square, I can proceed. **7** The load deck has four load bed guides that are adjusted to the inner width of whatever vehicle will be carried. I leave these off until my load is brought forth. **8** The frame is a pretty stout

casting, and like the trailer, the rails are arrow-straight. The front steering cannot remain workable due to the complexity of all the steering linkages. **9-12** At this point, my spindles are loose and I decide then to set them for a right turn. I double-check my spindle angle from side-to-side and lock it all down from the boxes to the spindles. I ran into some problems with incorrectly numbered brake cylinders in the instructions and glued them on in the wrong direction. Argh! **13-15** I have to admire these ultra beefy Brit diffs. Both axles are extremely well detailed and have stout axle pins to support the

move forward with the rest of the spindle assembly. The spindles are loaded with parts and in turn will be connected to the power steering box and the steering box. Not labeled in the instructions is the tie rod (#18) that connects to the center tie rod (#17). At this point, my spindles are loose and I decide then to set them for a right turn. I double-check my spindle angle from side-to-side and lock it all down from the boxes to the spindles. This includes all linkages.

#### Oh dear, look at that rear...

I have to admire these ultra beefy Brit diffs, as

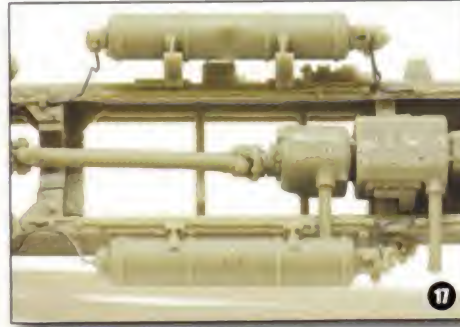
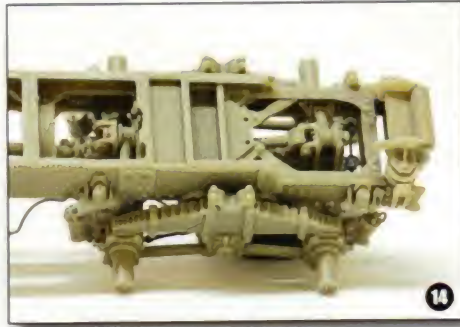
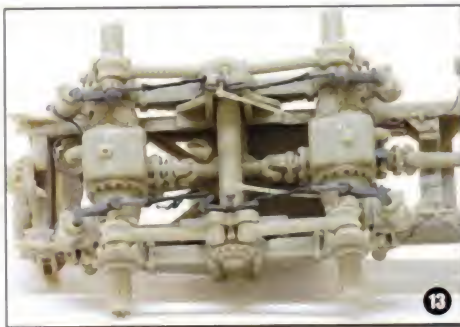
they truly dwarf anything else I have seen in my years of truck shenanigans. Both axles are extremely well detailed and have stout axle pins to support the weight of that big Brit arse. The center axle and the rear axle both have a traverse radius arm located by a pin and the traverse arms need to stay semi-workable until the axles are glued in place. The rear axle receives a center link radius arm that is glued in place. I set both axles on the springs and glue the inter-axle prop shaft in between both axles.

As I have done all the cleanup of my wheels earlier, I take my fronts and just my outer four rears and loosely set them on the axles so I can level the rear

suspension. Everything looks good, so I drop some glue on all the contact points for the rear suspension. I let this set for a few minutes and once it is dry, I take off all the wheels and glue all four radius arms in place.

Now the rear traverse radius arms are swung into place to the frame rails and tacked as well. I move to the brake cylinders and glue one on each corner of the axles. I then place the brake levers on each cylinder. Parts 39 and 40 are the right and left pivot levers and they connect all the linkage rods for the brakes. To ease the identification of these in pictures, I paint each one of these linkages a different





weight of that big Brit arse. I set both axles on the springs and glue the inter-axle prop shaft in between both axes. **16.** Although the instructions state that you can leave off the hydraulic plumbing off, I opt in favor of plumbing and get plumb crazy. **17, 18.** The middle of the frame gets the transmission and the drive shaft, which completes the drive train—then we have some awesome air tanks that mount to the frame rails. **19.** The motor is very nicely cast and is superbly detailed even though it is pretty much one piece. **20.** The motor has its own cradle that it slips into, and the lower oil sump is

added to the motor. **21** The finished assembly is not glued in place at this time, to facilitate painting the motor separately from the cradle. **22.** The front fenders both get some grab handles and two etch steps. I also add the left step for the cab and right cab step. **23.** The inside of the cab firewall received the various control boxes and dash panels. This inner dash receives five different control boxes. Also added here are the foot pedals and remaining control levers. I leave the seats out until after painting as well as the steering column with the steering wheel. **24.** The massive twin radiators of the tractor.

color. I do this because the pictures in the instructions are very difficult to identify the placement of these linkages. The instructions state that you can leave these as well as all of the hydraulic plumbing off since it is not seen. I opt in favor of plumbing and get plumb crazy... Like I said before; the suspension is quite beautiful and when it is done it is one of the best I've seen in resin.

The middle of the frame gets the transmission and the drive shaft. This completes the drive train. Now we have some awesome air tanks that mount to the frame rails, but I find that the numbers are switched on the directions. Fifty is the right hand

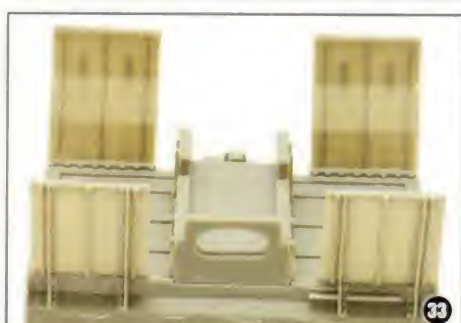
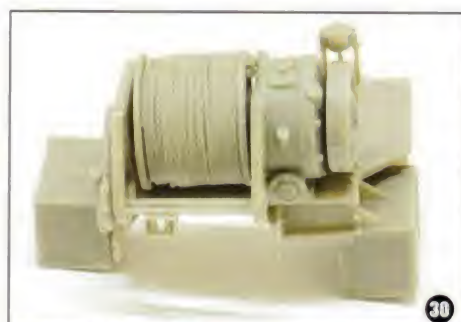
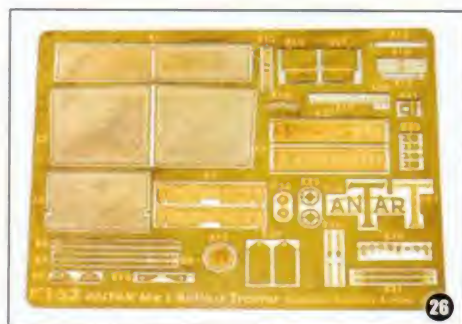
tank and 51 is the left. The mufflers mount just inboard of these tanks. Each will get a turndown pipe end and a header pipe from the motor. The front of the frame gets a steering guard that has a nice photo-etch screen for placement inside. I add the front bumper and pintle to the chassis. Last up for the underside is the front air tank and petcock; the two middle tanks get a petcock too, but I leave these off until after paint.

#### Meteor motor flex

The motor is very nicely cast and is superbly detailed even though it is pretty much one piece.

The motor has its own cradle that it slips into, and the lower oil sump is added to the motor. This assembly is not glued together at this time, to facilitate painting the motor separately from the cradle. I do however glue both front fenders to the frame, as these will support the air filter assemblies. Each side has its own support. These are mislabeled in the instructions. The front fenders both get some grab handles and two etch steps. I also add the left step for the cab and right cab step. To wrap up the frame, I move back to the rear and add the chassis rail end and on top of it the rear body sub frame. I add the pintle and pin as well, and the winch cable





**25.** Just by itself, the grille is an exquisitely molded affair. You gotta love those twin radiator caps, which correspond to the assembly seen in photo 24. **26.** When building the Mighty Antar, you will visit this big ol' hunk of photo-etch early and often, but the best of it is reserved for the grille. **27.** Mesh, logo, turn signal and mirror supports in place. This grille would make any hip-hopper proud, as the gold is quite impressive. **28.** Each side of the bonnet gets a photo etch screen. **29, 30.** The winch drum itself is massive, thick and girthy, just the way I like it. This winch assembly is glued onto the winch sub frame, and the storage boxes added. **31.** The final parts for the mid-ship of this beastly truck are the fuel tank assemblies, which consist of five pieces. **32.** For me, one of the hardest parts on this truck is the removal of all of the resin grab handles. These are the grab handles that make up the rear of the ballast body. Both right and left sides receive four handles and then a lower handle. **33.** Once the mud flaps are in place, I add the ladder frames to



each side of the ballast body. **34.** The fiddliest parts are the single and double tie-downs. **35.** Each large front mud flap receives one small photo-etch mud flap.

fairlead and fairlead wheel. I leave off the air line connectors until final mounting of truck to trailer, as these are very small and delicate.

#### A little cab will do ya

Assembly of the cab starts with the rear portion. This gets two grab handles per side. Instructions show gluing the cab roof to the back wall, but I leave this off until later. The inside of the cab wall receives rifle supports as well as a gear lever base. The instructions show this as being glued to the back wall of the cab but are mislabeled as part #114. In another view, these levers are shown glued to the floor of the cab. This is actually where I glue this part.

Moving on to the floor, the cab floor and front firewall are molded in one piece. The inside of the

firewall has some detail that will be added to it by various control boxes and dash panels. This inner dash receives five different control boxes. Part number 116 is the vacuum valve, 117 is the fluid reservoir, 118 is the dash switch, 119 is the junction box, and 129 is the actual dash cluster. I also add the foot pedals and remaining control levers. I leave the seats out until after painting as well as the steering column with the steering wheel. I will fit the column once the cab is glued in place. The cab doors have grab handles added to them, but these grab handles will be on both the inside and outside of the cab doors. Rather than mounting two separate grab handles, I choose to drill through the door where these grab handles mount and use one rectangular loop of wire cut to fit.

#### Punch you in the grille

The grille is an exquisitely molded affair and when you add each photo-etch mesh insert, this grille would make any hip-hopper proud, as the gold is quite impressive. The more complicated parts of the grille are the turn signal and mirror supports. You must first form part E6 to shape, as these will be the main supports for their outer portions. E7 gets bent to shape and added to E13. This forms a stronger part to add to the inner supports. Somehow I lose both my radiator mirrors. I do however make the mounting boss out of a round piece of plastic. I install the side indicators after painting the truck. These will get a dab of Tamiya Clear Orange and an outer rim painted in Bronze Green. I add headlight guards to both sides of the grille. The headlights are added after paint, as well as the side lights. To com-





36



37



38



39

**36.** The Meteor engine painted with Humbrol Enamel Matte 23, which captures the duck egg blue perfectly. **37.** SMILE and say: "Mighty Antar!" I love that big Thornycroft Antar logo. **38.** Certain details are picked out with Vallejo Model Air 003, Scarlet Red, prior to the weathering process. **39.** I shoot over the red oxide primer with

a combination of Vallejo 814, Burnt Cadmium Red and Tamiya XF-9 Hull Red to capture the proper primer color. For the chipping of the rear deck of the trailer, I make a combination of Tamiya XF-9, Hull Red and XF-69, NATO Black mixed with water, and sponge around the edges and contact points of tracks on the rear deck.

plete the bodywork, the bonnet is comprised of three pieces: right, left, and center. Each side gets a photo etch screen. The tie straps for the hood sides will be added as well, but after paint. Last but not least are the big T and the Antar script. All of these parts I set aside as sub-assemblies, to be painted later. Once they are painted, I assemble the cab to the chassis and grille to the front frame horns. Both of these will need to be in place to install the radiator supports and cab supports.

### Winchy woman

The main winch assembly is quite a piece of work. The winch drum itself is massive, thick and girthy, just the way I like it. It feels meaty in my hand... The pay-on brackets are added to the drum, and the pay on shafts are placed in between them. The winch frame roller is put in place on the very ends of the pay-on brackets. The main winch housing is glued, as well as the brake drum. This winch assembly is now glued onto the winch sub frame, and at this time I add the stowage boxes. Next are the winch drive and the pay-on drive, and this completes the drive mechanisms. The remaining controls are the brake hand wheel and the brake clamp supports. This one piece comprises the lower, upper, and mid unit. The winch assembly will receive four drive control handles. These are very delicate and

care must be taken when removing them from the casting block. The last thing to complete the winch assembly is the winch operator's platform. The final parts for the mid-ship of this beastly truck are the fuel tank assemblies, which consist of five pieces.

### Big ballast body

The ballast body is a finely molded box that is free of any imperfections and completely straight and true. For me, one of the hardest parts on this truck is the removal of all of the resin grab handles. These are the grab handles that make up the rear of the ballast body. Both right and left sides receive four handles and then a lower handle.

In order to place the handles, I start at the bottom and work my way up. My bottom reference point is the rear mud flaps. Once the mud flaps are in place, I add the ladder frames to each side of the ballast body, taking care to make sure they are spaced correctly as to fit the grab handles in between the rails. Once I have the lower handle in place on the ballast body, I can place the remaining three up the back of the body. The footstep goes at the base of the ballast body. Both ladders are glued in place in the lowered position. The rear number plates are glued in place with a small taillight. The larger taillights are placed right below these plates. The rear reflectors are added to the mud flaps and

this completes the rear of the ballast body.

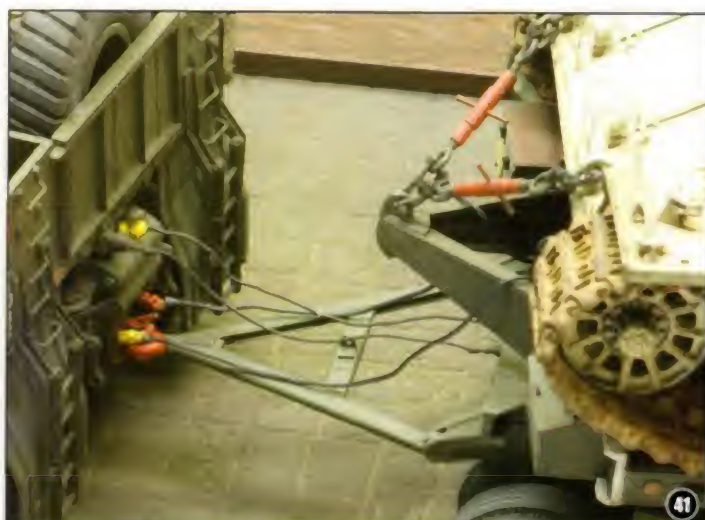
Moving to the sides of the ballast body, the fiddliest parts are added, these being the single and double tie-downs. It is nearly impossible to see how they are bent in the instructions. I did my best and bent them according to what I considered logical. Each large front mud flap receives one small mud flap. The top of the cargo body gets two storage box lids and a final grab handle goes on the top of each side of the ballast body. The load for the ballast body will be established and inserted after painting, and I also wait until after paint to add the spare wheel and all the other extra goodies. This completes the build of the mighty Antar. I am left now with fifteen subassemblies to be painted.

### Primp in prime, it's bronze green time

Before I get to prime this beast and its plethora of sub-assemblies—not to mention all the tires and wheels—I need to get a good mix for the bronze green. In the instructions, it specifies the Hannant's line of paint Xtracrylic XA1814 as the perfect match for the, "oily sheen green." Well then, shall I just jump over to Hannant's and get some? Turns out here in Cally-four-nee-a, Two Bobs—that's right, the airplane decal dudes—carry the whole line of Xtracrylics. SUPER!

I buy three bottles and now I am ready to prime.





**40.** The ballast blocks added to the rear body are sprayed flat black and weathered with a combination of Tamiya XF-9, Hull Red and XF-69, NATO Black mixed with water. Chains and pulleys top it off. **41.** Once the load is set, I combine both the tractor and the trailer on a base and connect the air lines and permanently tie these two together. **42.** You would think that fitting a tank to a trailer wouldn't be that hard, but

the lashing comprises many delicate parts. The rear lights of the trailer are MV lenses and each ramp gets a red and orange marker. **43.** Pat threw a figgy at me for the base. He's a Wee Friends casting with a Hornet head. The purpose of the red markings on the lug nuts is to alert mechanics not to loosen these nuts and bolts. The white is to show the lug nuts that are to be loosened to remove the wheels.

Priming for me now means finding the closest match to the base color. The Tamiya line of spray lacquer is best suited for this endeavor. In this case, it is TS-70, JGSDF Olive Drab. I don't prime with grey because it is too light and I have to spray a lot of paint to get full coverage. I don't use black either because it is too dark, or tints the main color to a darker hue. The JGSDF Olive Drab is just dark enough to give some shadow effect for the bronze green. For all the tires I use TS-S2 Black Rubber.

I prime everything for the truck and all but the top deck of the trailer. After this dries, I mask the sides of the trailer and prime the top deck in red oxide. After a day of drying, I thin the Xtracrylic with water as stated on the bottle and start spraying. I have never used this brand of paint, but I am quickly digging it. The paint lays down extremely smooth and dries fast. The "oily sheen," as stated in the instructions, is captured perfectly.

I use a circle template to shoot all the rims for the truck and trailer. After making sure I have complete coverage of all sub-assemblies, I mock up the truck with the ballast body, winch, cab and all body-work, and give it all a complete overspray to tie in a consistent coverage. I let this dry overnight. For the engine, I use Humbrol Enamel Matte 23, which captures the duck egg blue perfectly. But man, does this

stuff stink! I set everything aside and let this dry for a few days.

Moving back to the trailer, for the top deck I shoot over the red oxide primer with a combination of Vallejo 814, Burnt Cadmium Red and Tamiya XF-9 Hull Red to capture the proper primer color. The tops of the ramps get the same treatment. Because the Hannant's dries in a semi-gloss state, I do not have to use any clear to prep for the decals, and apply my decals straight to the paint. I have no problems with silvering because of the smooth finish. I do apply some Microset on all the markings to help them settle down.

My choice for the markings is what is shown on the instructions. The Royal Corps of Transport decal goes on the right, and the unit markings go on the left (the No. 19 squadron "Man From Uncle" globe and the Sword of Strategic Command). The registration plates are set on the right front and left rear, respectively. The rear has to be cut and stacked on the photo-etch plate. I place the badge of the RCT on the doors, and this takes a little work because of its three-piece nature. I use an overhead magnifying light to check my alignment. This proves to be a very difficult endeavor, as I am working with a base decal still being somewhat moist. This causes the decals to move around while I am trying to set them. The Union

Jacks go on the front and back of the truck and are two-part as well. At this point, my eyes are going bananas, as is my patience. I let these set and dry a bit before applying a more of the setting solution.

Each one of the fire extinguishers receives a data plate, as does the dash. The dash also receives a tachometer decal and various gauge details, including a piece of copper foil placed on the dash left corner. The trailer also receives a registration plate and locker decals, and a yellow weight disk on the front. I opt out on applying the tire pressure decals, as I rarely ever add these to any model.

### The Mighty is taking shape

Once all the decals are on, I can start assembling the truck into its final state. This entails gluing the ballast body into place as well as the winch, fuel tanks, and front grille. The cab I have painted in multiple parts and at this time I install all the glazing for the windows. Then, I glue the rear wall to the base and glue the doors in place, thus completing the lower half of the cab.

I can now glue the cab to the chassis and start installing the radiator and cab supports in the engine compartment. I leave the cab roof and bonnet loose to facilitate the final photos. At this time, I also add all my lights and side markers and start





the detail painting that will add some color to this truck. I go around the truck with Vallejo Model Air 003, Scarlet Red and pick out the control handles, tow pintle, hand brake levers, and the filler caps for both fuel and radiator. To complete the detail painting of the truck and trailer, using Scarlet Red, I move to the wheels and hit all of the center hub bolts. These are the innermost bolts on each wheel. Once these are all picked out, I go back with some white and hit all the lug nuts for each individual wheel. The purpose of the red marking is to alert mechanics not to loosen these nuts and bolts. The white is to show the lug nuts that are to be loosened to remove the wheels. These two colors are often confused in this configuration, so pay attention.

All the tires and wheels of the truck and trailer are finished at this point, but I leave them off for the weathering. The ballast that will be added to the rear body is sprayed flat black as per the instructions, and set aside for weathering. Other details to paint are the

lights and reflectors for the truck and trailer. Using a silver Sharpie marker, I hit the rear lights on the truck and all reflectors on the truck and trailer. After the Sharpie is dry, I go back with a red fine-tip Sharpie and do the rear lights on the truck and, in orange Sharpie, do all reflectors on the trailer. This works better for me, as I have more control with the Sharpie than with Tamiya Clear. The rear lights of the trailer are MV lenses and each ramp gets a red and orange marker.

### Weathering

During discussions with a fellow modeler, we came up with the concept of a massive tank to be the load for this massive tank transporter. We

bare minimum.

For the chipping of the rear deck of the trailer, I make a combination of Tamiya XF-9, Hull Red and XF-69, NATO Black mixed with water, and sponge around the edges and contact points of tracks on the rear deck. The same mixture is applied sparingly to wear points on the truck: around the winch housing and operator's platform, side steps of the cab, and edges of the ballast body.

This same mix was brushed onto the ballast blocks for the rear body. After the chipping was done, I went back over and applied various pin washes to the rear bed of the trailer and axle hubs. An oily mix is applied to certain suspension components and motor.

For the tires, I take the same mix of raw umber and lamp black and cover both rims and tires. After this wash is dry, I apply a mix of pigment to this oily wash, consisting of Mig Pigment Industrial City Dirt and a small dab of Mig Black Smoke. This is applied to just the tires. After this wash dries, I mix a very small amount of unbleached titanium into this wash and apply it to the tires as well, but mostly just to the side walls. After this dries, I take this mix and give the complete underside of both truck and trailer a liberal wash, adding more Industrial City Dirt and Raw Umber oil paint. Combining oils and pigments has given me a plethora of weathering effects.



I go back over the truck and trailer with a light dusting and

streaking of Industrial City Dirt and Mig faded Panzer Grey, keeping the grey to a minimum. I heavily dust and wash the ballasts for the back bed of the truck. When this dries, I drop it into place and add the final bits to the cargo bed, with the spare wheel, gas cans, and some bits of chain. With all my tires dry, I add them to the truck and the truck is finished!

With the trailer, I start from the inner rear and work my way out with the tires. I do the same for the front turn table, making sure that as I glue the tires are straight and true to each other. Luckily, when I flip the trailer over, due to the workable suspension, I have full contact to the ground with all tires. Superdope's in the house!

### Pain in the lashing

After receiving the Caernavon, I needed to fit the tank to the rear deck of the trailer. This would be the most complicated aspect of the build. You would think that fitting a tank to a trailer wouldn't be that hard, but the lashing comprises

s p o k e  
w i t h  
D e r e k a t  
A c c u r a t e  
A m o u r a s t o t h e  
f e a s i b i l i t y o f t h i s  
c o m b i n a t i o n a n d i t w a s  
d e e m e d a c c e p t a b l e t o  
c o m b i n e t h e t w o . T h e  
t i m e l i n e i s e x p l a i n e d i n  
t h e a r t i c l e o n t h e C a e r n a v o n  
(M M i R 5 0 ) .

For the body of the truck, I apply a very light oil wash of raw umber mixed with olive green. This is carefully applied, not as a full wash, but as a spot wash. I also streak the rear ballast body and parts of the truck with a combination of unbleached titanium and olive green, but this is kept to an absolute





many delicate parts.

After placing the tank on the trailer, I establish my placement for the load bed guides for the inboard part of the tracks. Once these are glued in place, I am able to have the side-to-side established and just work on the fore and aft. This is critical for the construction of the ties, as I need to be able to move the tank slightly to tighten the slack in the lashings. I did not glue the tank on, but merely sat it on the deck.

Once I have the tank in place and the lashings taut, I now remove these lashings and paint them. This proves to be very risky, as there are not a lot of spares of the double loops and small shackles. After the paint has dried, picking out the turnbuckles in Vallejo Scarlet Red and the remainder of the chains and shackles in Bronze Green, I reconnect (starting from the front) the shackles to the tank. What I do not realize is that when I go to connect the rear lashings, I confuse the right and left and I have a couple of really frustrating moments laced with many expletives. Once I realize the mix up, I correct the side to side and the tank now is locked down to the trailer.

At this point I can sit back and admire a huge motherfreakin' tank with a considerable track overhang to the deck of the trailer. Even just the tank and trailer alone would make many tank aficionados giddy. At this time, I combine both the tractor and the trailer as one on my base that I have chosen so I can connect the air lines and permanently tie these two together.

#### The end?

The overall feeling of combining these two builds into one cohesive unit is quite impressive. Having an editor with similar ideas of oddball com-

binations is crucial in any kind of undertaking of this scale. Mike and I were in communication from the beginning, even before I had placed hands on the actual Antar kit. Mike was able to finish what he had started so long ago and I was able to undertake this project with a definite concept in mind. I could have taken an easier route and just put a Centurion on the back, or some other post-war British tank, but that is not my style.

The challenge for me is to do subjects that are off the beaten track and combine vehicles and/or elements that would not normally be combined. This takes a little bit of research to establish the

feasibility of combinations. In this case, the Antar and the Dyson trailer combo can easily be placed at a dock, picking up a trials tank that is coming back from the field.

I fully enjoy stepping out of my norm of WW2 and modern subjects and building a Cold War tank transporter that will never be offered in plastic. Accurate Armour has again given us a spectacular resin kit that, with a little bit of planning and patience, will satisfy any resin aficionado. There is not much you can't like about this transporter—just make sure you leave room for the Mighty Antar.

—Anthony "Superdope" Guarderas

## MMiR RECCE

**Accurate Armour Mighty ANTAR Mk-1 Ballasted Tractor.** Kit number K163. Kit graciously provided by the manufacturer. Retail price £166.67.

**Accurate Armour DYSON 50 Ton Drawbar Trailer.** Kit number K168. Kit graciously provided by the manufacturer. Retail price £108.33.

#### References

*Modern British Army Tank Transporters*, Tankograd British Special No.9016 by Carl Schulze. A good, value-priced reference with several good photos of the various versions of the tractor and trailer.

*Tugs of War: Heavy Recovery Vehicles, Tank Transporters and Artillery Tractors of the British Army, 1945-1965* by Pat Ware Warehouse Publications, 1995. ISBN: 0952556316. A hardcover book that covers the larger subject. Decent coverage of the Antar. Difficult to find and expensive when you do.

\* Note on the use of the Union Jack: We have endeavored to accurately depict the flag of the United Kingdom and have drawn it to the exacting specifications provided at [www.jdawiseman.com/papers/union-jack/union-jack.html](http://www.jdawiseman.com/papers/union-jack/union-jack.html), as well as [www.flags.net/UNKG.htm](http://www.flags.net/UNKG.htm). However, the correct dimensions of the flag should match the ratio of 2:1. The image in the opening spread is actually closer to the British Army version of 5:3, but was created by slightly trimming the original 2:1 image to fit the magazine's format. We intend no disrespect to our British readers in doing this and if any is taken, we politely remind them that we gave the UK McDonald's, Burger King, Pizza Hut and KFC and never asked for so much as a "thank you."

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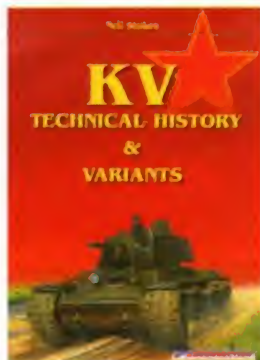
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# Pumped-up Panzer!

## Messing up Tasca's 1:24 Panzer II F



**H**aving been an admirer of 1:16 armor, but not having either the cash or the space to display these large-scale models, I was excited to hear of Tasca's impending release of a Panzer II in 1:24 scale. You might say I felt a little thrill (known as a hamster in Europe) run up my leg. The release accomplished two things. It would scratch my large-scale model itch and not force me to tell my family there would be no food on the table for a while!

Seriously, the announcement did get my attention. I thought 1:24 would be a great compromise between 1:35 and 1:16 for this diminutive panzer. As the great Clint Eastwood once said: "a man's got to know his limitations." As I approach the age of 50, my eyesight for the tiny stuff is, let's say... limited.

While other companies have dabbled in 1:24 with mixed reviews, I felt that with Tasca's excellent reputation for superior 1:35 armor, this would be a thoroughly enjoyable build. I was right, it was. Additionally, given the wonderful engineering and detail of this kit, I think it's a great value compared to the price of 1:16 scale kits.

So what's all the hoopla about? In the box, you get nine sprues in tan styrene, two clear sprues for the vision blocks, 15 track sprues cast in black styrene, a small photo-etch fret with 18 parts, and a

small bag of pre-cut track pins. The detail on the parts is excellent—with the exception of the main gun and co-axial machine gun. In my opinion, these could have been better given the scale, but Aber comes to the rescue, releasing not only a reasonably priced set of turned barrels for the main 2cm KwK 30 gun, and the co-ax MG 34, but also a photo-etch sheet to further pimp out your petit panzer!

### Construction, the tingling begins

For this build, I figured I'd do something a little different and follow the directions—sort of! Opening up the 23-step instruction booklet, I begin building the lower hull. Rather than the typical hull tub, Tasca has broken this down into five parts: floor, left and right sides, front and rear. The lower hull is nicely detail with all the appropriate rivets and access plates. The five hull parts come together quickly with little or no clean up, and no seam fill-

ing required. With the hull together, you instantly get a sense of how big this little panzer is going to be.

Next, I build up the road wheels, drive sprockets and idlers. As one would expect, these are very crisply molded with nice hub detail. The drive sprocket is particularly nice with beautiful bold detail all around. There are four knockout pin marks on the insides of each drive sprocket that will require some filling and sanding to ensure they're not visible once on the tank. Each wheel assembly makes use of a small poly-cap that makes it possible to paint and weather the wheels separately.

Next it's on to Step 5, the suspension. This is probably the one area that requires careful attention. The suspension springs are not all alike. The instructions detail how each arm is built, and consist of four separate spring arms, labeled A through D. Using a small marker, I write the corresponding letter on each to tell them apart. Tasca has molded the casting seam along the joint of each bogie arm, so care must be taken not to sand or file these off.





**1.** The lower hull tub is made up of a separate floor, sides, front and rear. The fit is good and the detail is excellent. **2.** The final-drive housings benefited from some Mr. Surfacer to accentuate their cast texture. **3.** The instructions have you glue each suspension arm to the hull. I choose to make them functional by drilling a small hole and then inserting a short length of styrene rod to lock the bogies in place. **4.** The suspension springs are not all alike. Using a small marker I wrote the corresponding letter on each to tell them apart. **5.** The large drive sprockets are nicely detailed. Note the four

ejector-pin marks on the inner face. These have been filled, as they will be visible on the finished model. **6.** The road wheels are nicely detailed, but don't display any manufacturer's logos or info on the tires such as we have seen on Dragon's recent 1:35 kits. **7.** Even the small access plates on the rear hull come with separate wing nuts. Note the intake louvers have been painted black prior to fitting the hull top. **8** and **9.** The smoke candle box provided in the kit is rather simplified, and doesn't contain individual tubes. Aber comes to the rescue and provides all the parts you'll ever need.

The instructions have you glue each bogie arm to the hull, but I choose to make them functional. I first position each arm in the hull and then mark a line where it protrudes inside the hull sides. I then remove each bogie and drill a small hole through the line. This hole will receive a small length of styrene rod to lock the bogies in place. While this trick doesn't make them fully functional, it does give enough movement to permit you to get the wheel to conform to any base work you may want to place under the model.

One note before we leave this step. I did not attach the spare track or the holder during this step.

However, I did build up, paint and weather a length of spare track and its retaining bar and then set them aside to add to the model at the end of painting.

Next, it is on to the smoke candle box, towing pintle and the other parts that attach to the rear hull. The smoke candle box provided in the kit is rather simplified, and doesn't contain the individual tubes of the real box. Aber comes to the rescue here and provides all the parts you'll ever want. All of this beautiful detail will be invisible if you close the lid, but you'll know it's there. As luck would have it, the lid I painted and weathered for the candle box mysteriously vanishes somewhere on—or more likely

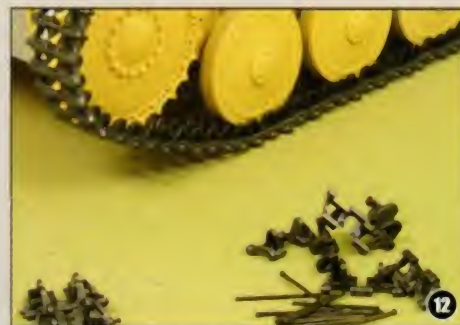
under—my workbench, and is never seen again. Seriously, the Aber parts are a very worthwhile addition to the simplified box, and fit perfectly inside the Tasca armored outer box, which attaches to the rear hull.

Step 8 has you attach the road wheels and track, but as I already mentioned, I leave these off so they can be painted and weathered later.

### Upper hull

Now it is time to go topside and begin building the upper hull. Tasca breaks the upper hull down into two sub-assemblies, forward and aft. Step 9





**10.** The large fender mounted stowage box received some new hinges and beautiful Aber photo-etched locking clasps. **11.** The muffer receives a stippled on coat of Mr. Surfacer 500 to add some needed texture. **12.** The tracks are supplied as individual links. Tasca even includes metal pins to link them together. Cool or what? **13.** One of the only weak points of the kit is the gun barrels. These are swapped for the awesome turned aluminum and brass items from Aber. **14.** The cupola is a 22-part affair, comprising 14 clear styrene vision blocks; their frame and the six-part commanders hatch assembly. We call that well detailed! **15.** The clear styrene vision blocks received a coat

Tamiya clear green to create that distinctive armored glass look. **16.** With the help of the Aber superb photo-etched fret and turned metal guns, this kit has turned into a real winner. **17.** The Panzer gray base coat consists Tamiya German grey, medium blue and flat white. Following this initial coat, adding white to the mix fades certain panels and areas. **18.** Archer's new dry-rub transfer set designed specifically for this kit adds a much-needed splash of color. **19** through **21.** A "scratch coat" is added using a mixture of Vallejo Model-Air Pale Blue and US Grey for the highlights and for the dark rust areas SS Camo Black-Brown is used.

builds up the aft portion of the upper hull and the engine access. This is a simple, enjoyable build with all the parts fitting beautifully. Care and attention should be taken when gluing part C-41, as this grille needs to go in a specific direction. Make sure you blackout the engine compartment so you don't see naked styrene through those wide grilles. Tasca has molded the small rods that attach to the side of the intake (parts C-46 and C-48) in styrene. These are very nicely done, but easily broken when cleaning up the small mold seam present. I chose to replace

mine with .20-thousands brass rod, bent to shape.

Now it is on to the forward upper hull and fighting compartment. This is made up of about 12 parts. This is my only other disappointment with this kit, aside from the guns. The weld seams that should be present here (and on the turret) are missing. Adding them is not that hard to do, and in this scale they should be clearly visible. I used both the stretched sprue trick, as well as Archer Transfers Surface Detail weld beads to replace all the missing weld around the tank. Again, this was not a huge

problem, just a little surprising.

The turret is a quick build with the only slip-up being the missing welds. I replace the weak kit gun barrels with the beautiful Aber parts. I leave the barrels off, paint and weather them individually before I attach them to the painted model. The guns are first painted in Tamiya NATO Black and then rubbed with graphite powder to achieve a metallic sheen.

The cupola is a beautiful 22-part affair, consisting of 14 clear styrene vision blocks, the frame is





22



23



24



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**22.** Following a coat of Future and then a coat of hairspray, Tamiya Flat White is misted on. **23.** Once the excess white has been scrubbed off with the help of some water and a brush, some of the recessed details are accentuated with MIG Productions Winter Camouflage Wash. **24.** A small amount of Russian Earth, Europe Dust and Dry Mud are liberally dusted this onto the lower

hull. A round brush loaded with some Tamiya Thinners set these in place. **25.** A tarp sculpted from Apoxie-Sculpt, into which a spare road wheel is pressed, lived in look to this petite panzer. **26 through 29.** The tracks are first primed with Gunze Mr. Surfacer 1000, before breaking out Life Color's superb Dust and Rust paint set. The tracks are then first airbrushed in the dark brown color with the remaining colors stippled on using a sponge in a random pattern. MIG Productions pigments are then liberally dusted onto each of the track runs. The pigments are then sealed in place with Mig Pigment Fixer. **30.** The distinctive polished effect of the wheel rims is due to the fact that they make contact with the guide horns of the tracks. A graphite pencil used in combination with a circle template makes short work of adding this effect.



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which they sit, and the six-part commanders hatch assembly. I use Gunze Mr. Masking Sol to mask off the clear parts while they are still on the sprue and give them a coat of flat black. The masking is then removed before everything is glued up inside the

cupola.

Remember when I stated I "sort of" followed the instructions? Well, I goof when building the mud flaps in Step 22. I attach part E-26 to each main fender first instead of building the mud flap assem-

blies and then attaching the entire assembly to the fender. As a result, the alignment is off enough to make it impossible to attach the part to the kit-supplied photo-etch parts (PE-6 & 7).

### Tools and clamps

Tasca has done a wonderful job on the tools and clamps. I combine both kit and Aber parts to complete the tools. I replace the shovelhead with the Aber part, but decide not to use the their photo-etched tool clamps. Even in 1:24 scale, these are fiddly. Besides, the Tasca clamps are fine in my opinion. Just so you all don't think I'm a complete wuss, I did use the Aber clasps for the right-side storage box and the fire extinguisher bracket—so there! Like the road wheels, guns and track, I leave off the tools to facilitate painting them separately. I do glue





**34-35** Various view of the finished model. The larger size of this kit really provides a wealth of detailing and weathering opportunities. The scale is a perfect compromise between 1:35th and 1:16th and provides a pallet to hone your painting skills in a size

that's comfortable. Normally, somewhat of an afterthought, stowage can now become a major feature of the model, even without swallowing it up. Photo 36 provides an interesting comparison with a 1/35 scale M10. Hey Tasca—I've got more room on the shelf!

the lower tool clamp parts (E-2) to the fenders during construction.

#### Paint that panzer—more tingling!

For my subject, I want to go for a very worn-off white wash over panzer gray scheme. I got my inspiration when saw a picture of the crew of an Sd.Kfz 251 scrubbing the whitewash off their vehicle using brushes and pails of water.

I was a little concerned how I to pull off this look, when Sin Industries released their new Winter Whitewash and Cold Wash filter sets. I was fortunate enough to get a review sample of these for use on the kit. More on this later.

To begin the painting process, I have several major sub-assemblies, the road wheels, track, hull, and turret.

The hull, turret and wheels are first primed in red-primer before moving on to the panzer gray coat. I give the Color Modulation a try on this build, so once the red is dry, I give the entire model a coat of a custom mixture of Tamiya German grey and medium blue thinned with Tamiya Lacquer Thinner. This initial coat is followed by a second, this time lightened with Tamiya Flat White, XF-2, but only to

specific areas where a light source would fall. Once satisfied, I seal everything with Micro-Sol Satin.

With the model sealed, I add the markings. Archer Transfers are kind enough to supply me with a set of their AR 35326, designed specifically for this kit. This set includes markings for a vehicle from the famous 11th Panzer Division. I've always loved the

ghostly logo of the 11th! As with all Archer products, these go on beautifully. The satin coat is not really necessary, as the transfers work best on a matt finish.

The markings are again dusted in Micro-Sol to protect them during the weathering process, and then misted with hairspray for the next phase—whitewash.

#### Whitewash

Using great restraint and a vision of a "barely there" whitewash, I spray a light coat of Tamiya Flat White to a just few areas to create the distressed, worn-off look of the whitewash. After a quick blast under a hair dryer, I take off most of the whitewash, leaving within a few recesses and around the base of prominent details. These will be accentuated later using the Sin Industries Whitewash Effect.

#### Chips wit dat?

Because of the scale of this kit, I want to delicately chip up the finish to give the tank that lived-in look. The chipping process will consume the greatest amount of time spent in this project. Most of you have by now





read about many chipping techniques. For this kit, I produce a layered chip. To accomplish this, I first apply what I call the "scratch-coat," using a mixture of Vallejo Model-Air Pale Blue and US Grey. This is applied in a very random way using a Windsor & Newton Series 7, 000 brush. I complete this process with careful consideration to what areas would get the most wear, going over the entire vehicle. Next, come the deeper chips. For this I turn to my favorite color, Vallejo SS Camo Black-Brown (#0822). Using the W&N Series 7 brush again, I color in the scratches made earlier. This process is repeated next on the road wheels. This takes time, so patience is crucial to achieve the desired result. It takes me the better part of four evenings to make my way around the kit.

Once the chips are done, it is time to get dirty! I pull out my stash of Mig Pigments, washes and filters to complete this phase. Starting with the Filters, I airbrush a light mist of Mig Blue for Panzer Grey filter to the upper hull and turret. With this dry, I moved to Pigments.

The secret to pigments is to mix 'em up. Don't use one color out of the bottle. Think about where the vehicle might be operating and develop a pigment mixture accordingly. Since my vehicle would have been operating in Russia, I mix up a small amount of Russian earth, Europe dust and dry mud and liberally dust this onto the lower hull. To set these in place, I use a round brush loaded with Tamiya Thinner. I let capillary action draw the thinner out of the brush and absorb into the powders. Again, like the chipping, this also takes time.

Once the pigments are on, I crave even more tonal shades! To accomplish this I mix Mig Brown and Dark washes and apply these around the suspension parts, under the fenders, and randomly onto some of the pigments on the lower hull. This really helps the pigments pop.

#### Whitewash continued

Turning my attention back to the upper hull, I break out my bottle of Mig Winter Camouflage Wash. This is a chalky, milky effect that I apply using a fine brush. My goal is to let these brighter whites flow into recesses and around the raised details that the crew would have had trouble scrubbing off in the Spring. The Mig effect is perfect for this. The white pigment falls out of the solution after time, so for deeper whites, I don't shake



up the bottle, but rather dip my brush into the concentrated pigments at the bottom of the jar.

I don't believe this product can be used to achieve whitewashes for using the hairspray method, but I plan to continue to practice with this to see what other effects can be achieved.

#### More washes, the weathering continues

To finish the painting and weathering off, I apply a pin-wash to raised areas, bolt details, lifting hooks, welds, etc. This produces a nice three-dimensional effect with the whitewash below and the darker dirtier pin wash above. This process really helps give the model depth.

#### Git 'er done!

As I mentioned earlier, the tracks are individual links and are beautifully molded in back styrene. Each link is joined together by a pre-cut, metal track pin that is already painted black. Each link needs to be cut from the sprue and cleaned up with a little sandpaper. The lengths go together rather quickly thanks to the pre-cut pins and the size of the links (about the same as a 1:35 scale Panzer IV link). Each track run consists of 108 links. Once each run is built up, I gently crimp the inside ends of each pin to prevent them from falling out. This makes the track fully workable and provides a

sturdy joint that prevents the links from coming apart. The tracks are then primed with Gunze Mr. Surfacer 1000, and set aside to dry.

Once dry, I pull out my trusty Life Color Dust and Rust paint set and go to work. If you have not experienced the pure ecstasy of this set, you don't know what you're missing. Put down this article and move directly to your computer and order one for yourself. You won't be disappointed!

I airbrush the track runs with the dark brown color (701) first, then apply the remaining colors (701-703) with a 3M Sponge in a random pattern. The Life Color paints dry fast so I am

able to move on to the next phase of the track painting right away. With some of the left over pigment from the hull, I liberally dust each of the track runs. These are then sealed in place with Mig Pigment Fixer. This process is repeated on the spare track lengths I built up earlier. One run is placed on the front hull and fixed in place with part D-15. Another length of spare (yes, there are plenty of links to make a couple lengths of spare) is draped over a tarp sculpted from Apoxie-Sculpt, into which I press an extra road wheel. Note that on the spare road wheel, I remove the hub and drill out the boltholes.

#### Whew—is it over yet?

Yes, I know it's been a long road, but I'm very happy with the results. This is a thoroughly enjoyable build from start to finish. The scale is a perfect compromise between 1:35th and 1:16th and provides a pallet to really hone your painting skills in a size that's comfortable. Aside from the few minor dings for the guns and missing welds, the kit is a bargain. The addition of the Aber sets permits the addition of even more detail.

Tasca has released an Africa Korps version of the Panzer II, a set of Jerry cans and a spiffy-looking Zundapp KS 750 with Sidecar motorcycle is inbound! The obvious question is what other spin-offs can we expect see from this Panzer II chassis in the future? Wouldn't a Wespe be cool in this scale? Time will tell whether this scale will find a profitable home. Until then, let the good times roll!

—Tom Jett

## MMiR RECCE

Tasca Panzer II Ausf. F, 1:24 scale. Kit number 24-001. Kit graciously provided by HobbyLink Japan. Suggested retail, \$66.95.

Aber 1:24 scale Barrel set AB 24 T02. Suggested Retail, \$15.95.

Aber 1:24 Panzer II Detail set AB 24 T01. Suggested Retail, \$15.95.

Aber 1:25 Antenna AB 25 007. Suggested Retail, \$8.00.

Archer Transfer Set AR35326. Suggested Retail, \$7.95.

All Aber sets graciously provided by the manufacturer.

Archer Perfect Weld set AR88005. Suggested Retail, \$17.95.

#### References

Achtung Panzer # 7 (Panzer I and II) published by Model Graphix.



# One BT just for me

## The Russian offering from Mr.T



**T**he BT-7 was a Soviet light tank introduced in the 1930's. It saw service against the Japanese in Mongolia in 1939 and during the early parts of Operation Barbarossa in 1941. The BT design was based on Walter Chrisite's suspension and hull. It could run with or without tracks. It was fast and well-armed for its time. It did have some disadvantages. Armor protection was only slightly better than your average Honda Civic, it had a three man crew and most carried no radio.

I thought this was a weird choice for Tamiya. They already have a track record for releasing unique subjects. Think Char B1 Bis and Renault UE. The thing that makes me scratch my head is that Zvezda and Eastern Express already cover the BT subject pretty thoroughly. All this aside, Tamiya still proves that it's a class act when it comes to kit quality. Great instructions, a full color photo walk around, decals for five different vehicles are just the start of the goodies. There are two decent figures and some other nice parts thrown in there too.

### Get your glue on

Things start out with a lower hull composed of separate flat plates. Rivet fans may need a bib for this. Taking time lining things up and going lightly on the cement provides breathtaking results.

Next come the suspension arms. All of the arms have positive mounting so it's virtually impossible to end up with a tank that doesn't sit level. The front road wheel on the real thing is used for driving and steering with tracks off. This is not poseable in the kit, but it doesn't matter to me as I am building mine with the tracks on. Almost all of the in-action shots of the BT-7 I found have the tracks on. There is a seat for a driver figure included here if you decide to add one.

Since all of the wheels come with poly caps, it's easy to add them to assemble the link and length tracks and then pop the wheels and tracks off for painting. I glue the front idler and rear-mounted drive sprocket into the track assembly for added strength. There are some small pin marks on the track lengths that are filled in using putty.

Some missing rivet detail is added to the final drive covers (B10 and B11) using a beading tool set. A beading tool set makes nice round rivet heads. It's really simple. You take a thin piece of sheet styrene and put it against a thick piece of cardboard and push. A good beading tool set is available from jewelry supply stores. Try FDJ on time ([www.fdjtool.com](http://www.fdjtool.com)) item number 53.160 if you want one.

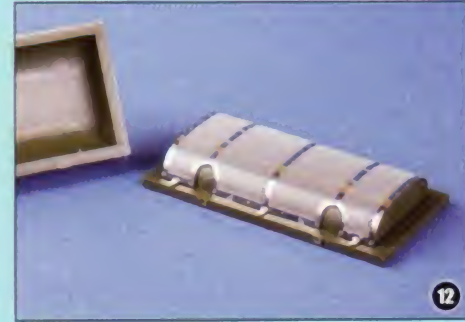
Detail on the upper hull plate is great. The tailpipes are molded with hollow outlets. Tamiya provides a very nice stainless steel photo etch screen for the exhaust area that is easily formed

with the kit-supplied bending jig. I add the missing rivets from using the Tasca Sherman rivets provided for their road wheels. There are flat photo-etch intake grills provided for the radiator too. The only complaint I have about Tamiya photo-etch parts is that the parts do not take paint well. The fuel tanks on the fenders can be posed as shown on the instructions or with both caps outboard. Take a look at some photos and you'll see what I mean. I only use one taillight. For added detail, I add a conduit. Reference pictures show a wide variation with both, one or no taillights mounted at all.

The upper hull (C27) and glacis (B17) plates both have teeny gaps around their perimeters that are tightened up with the careful application of putty. There is a slight gap behind the driver's upper hatch that is shimmed with a small piece of sheet styrene and filled with putty. Conduits are added to the headlights, taillight and horn using fine wire. Small guard plates for the area where the conduit enters the hull are made with sheet styrene. I also add weld beads made from stretched sprue around the front tow hooks (A39 and A40) and the conduit guards. By the way, Part A32 is a jack. Someone had to point this out to me. Duh.

I also scrape off the molded on spring to the driver's hatch to add one made from coiling thin copper with around a styrene rod. The front fenders are thinned out using a motor tool and then





**1.** Tamiya gives you some goodies here with a tow chain, clear parts, poly caps (gotta have 'em), a shiny tow chain and a nice set of photo-etch screens all make this a pretty complete kit. **2.** Two decent looking figures are included. A map for them to look at is on the instruction sheet **3.** There are five marking options right out to the box. **4.** Rivets to make you drool... **5.** The hull consists of flat plates. This shapes up nicely if you exercise due care. **6.** The front road wheel was used for propulsion and steering when the tracks were off. It's not poseable, but this doesn't

matter if the tracks are on. **7.** The link and length tracks go on nicely. The poly caps in the wheels help a lot here because you can pop all this off for painting. **8.** A close-up shows you how well the tracks fit. **9.** Some missing rivet detail is added using a beading tool. **10.** The beading tool on action. I place a thin sheet of styrene against a piece of stiff cardboard and punched away. **11.** Slide-molded tailpipes and main gun barrel. Woo-hoo! **12.** The large photo-etch exhaust outlet screen comes with its own bending jig.

bent up a little. These are pretty flimsy and a fair amount of photos show them missing. The last detail added on the hull is the tow chain. This is kind of a pain in the ass. I pre-paint the chain and all the paint flakes off while I am trying to position it. Oh, well.

The little turret finished things off in the assembly stage. Tamiya provides decent armament here with the main gun and coaxial machine gun both having breech detail. Aber (35L-112)

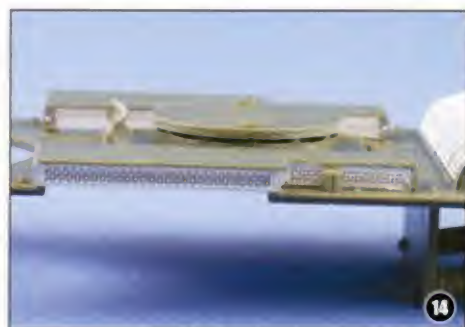
and Lion Marc (LM10040, or LM50006) both make excellent replacement barrels that arrive just after I get the gun together. I do replace the coaxial machine gun barrel with an Aber part from 35L99 because the kit barrel keeps bending every time I handle the turret. There are some seats for your little dudes to stand on if you fill the turret hatches too. If using the cool command antenna, don't forget to drill those holes before putting the turret halves together. The turret roof plate (C20)

fits a little loose. I fill in the gap around the perimeter with putty and then add weld bead using my X-Acto and liquid cement. The last little detail I add is the missing rivet detail to the base plates of the command antenna

#### BT Color

The model comes with marking options for five different vehicles. Not bad. I decided on a camouflage scheme derived from a color plate I





**13.** I add rivets from a Tasca Sherman to the engine deck screen and gave my single taillight a conduit. **14.** The other screens in action. The photo-etch does not hold paint very well. **15 and 16.** I tighten up the seam on the upper hull roof and glacis. Conduits are added for the lights and the horn. A guard for the horn was added with scrap plastic. Weld beads are added with stretched sprue. I also add a spring made from thin copper wire to the drivers hatch. **17.** I dinged up my front fenders a bit, as they are flimsy on the real thing. **18.** The sum total of the interior detail. There's a driver's seat and some seats for the turret. Hatches are molded on both sides with a clear part for the driver's hatch. The main armament includes breech detail. **19.** A close-up of the breech detail. **20.** I filled in the seam around the turret roof plate and add a weld bead. Rivets are added to the base plates of the command antenna. **21.** The model in subassemblies with the green on. **22 and 23.** Silly putty was used as mask for the brown. The markings are masked off and painted using Tamiya tape. **24.** Bring on the dirt. Mig Pigments are used on the lower hull.



found online at The Russian Battlefield ([www.battlefield.ru](http://www.battlefield.ru)). There were a few photos from Ground Power that backed this plate up, more or less. Zvezda's box art for the same vehicle shows this scheme too.

All model parts are first primed using Tamiya spray Rubber Black (TS-82). Tamiya acrylics are used for the entire paint scheme. The green is applied in three shades. The shadow coat is Dark Green, XF-61. Succeeding highlights are applied as per the instructions using a mix of Yellow Green, XF-4 and Olive Green, XF-58. The brown is applied in three shades too, using a base color of Flat Brown, XF-10 darkened with Flat Black, XF-1 and Flat White for the highlight. Masking is accomplished with silly putty and patience. The red and black

turret markings are created using the various thicknesses of Gunze and Tamiya masking tape.

Small details are painted using Vallejo. Panzer Aces Dark Rust, 302 is used as a base coat for metallic parts like the tracks and tailpipes. Dark Sand, 70847 is used for wood. The wheels, shovel heads and coaxial machine gun barrel are painted German Grey, 70995.

Vallejo Colors are also used for the chipping effects. Russian Green, 894 mixed with Dark Sand, 7084 is used for the lighter green. The light brown chips are added using Flat Brown, 70984 mixed with Sky Grey, 70989. SS Camouflage Black Brown, 822 is used for the very dark chips.







25. The tow chain is a pain to put on. I pre-painted this but it all flakes off during handling. Just paint it once you have it installed.  
26, 27. Chipping effects are added using Vallejo. Oil paints are used extensively for tinting the base coats, spot washes, and streaking.

Oil Paints are used for the wash and streaking effects. From Windsor and Newton, I use Yellow Ochre, Burnt umber, Raw umber, Burnt Sienna, Olive Green and Sap Green. From Lukas, I use Beige, Warm Grey and Sepia. Turpenoid is used for thinning.

Metallic effects on small areas such as the shovel and coax machine gun are done with a Prismacolor Metallic Silver pencil.

Citadel Miniatures Boltgun Metal, 61-57 and Mithril Silver, 61-55 are used on the tracks. Vallejo Matte Varnish (71059) is used to flatten everything out.

The lower parts of the model get dirty from Mig pigments set with Turpenoid. Smoke and some rust effects are added as well. Black Smoke, P023; Light Rust, P024; Russian Earth, P034; Rubble Dust, P234; Europe Dust, P028 and Dark Mud, P033 are all in play here.

#### My last word

The subject choice is a bit odd, but Tamiya did a

wonderful job engineering this kit and it was a joy to assemble. I had fun adding a few basic details to it too. You can get this puppy together in a couple of evenings, no sweat. Tamiya provides you with some

pretty straightforward paint and marking options. There are some more interesting ones if you hunt around a little.

—Jeff Kleinhenz

## MMiR RECCE

**Tamiya Russian Tank BT-7 Model 1935.** Item Number 35309. Suggested Retail \$62.00. Sample graciously provided by Hobbylink Japan ([www.hlj.com](http://www.hlj.com))

**Aber Set of 7 Barrel Tips for Soviet Degtarev DT and DP Machine Guns.** Item Number 35L99. Sample graciously provided the manufacturer.

#### References

*Ground Power June 1995* (No. 013). This was all in Japanese, but the photos are great. Has a good section on the T-34 too...

*USSR Light Tanks Register*: <http://legion-afv.narod.ru/Light-USSR.html> is the bomb when it comes to Russian stuff. Check this one out.

*The Russian Battlefield* ([www.battlefield.ru](http://www.battlefield.ru)) has some nice color plates and basic information. Prime Portal has a BT-5 walk around that is useful for some details as the BT-5 and BT-7 were quite similar.



# Wunder Zünder

Break out the Optivisor!  
Super-detailing Great Wall Hobby's  
Zundapp KS750 and Sidecar.



**T**he Zundapp KZ 750 was a real workhorse of the German Army during WW2, appearing on all fronts and in all sorts of conditions from sand to snow. Founded in 1917, Zundapp (Zünder und Apparatebau) became a major manufacturer of motorcycles after the Great War, supplying the German armed forces with various models. In 1937 the Army High Command required a motorcycle built just for mil-

itary use, as earlier models were adapted from civilian machines.

The KS750 was a completely new motorcycle designed to carry (with a sidecar) the equivalent of three fully equipped soldiers and capable of reaching speeds up to 60 mph. Instead of a chain, the Zundapp had a shaft to drive the rear wheel which no doubt gave the bike its "grunt." Entering service in 1940, production continued until 1948 with over 18,000 machines made.

## What you get

For such a small model there are a LOT of parts—six sprues in grey styrene, one clear sprue, plus a few small photo-etch frets. The standard of molding is high with minimal flash present and the detail is excellent. The wheel spokes (always chunky molded in plastic) are provided in photo-etch and you have the choice of two types of trailers. There are three, all-Wehrmacht, decal options included: 15th Panzer Division, North Africa;



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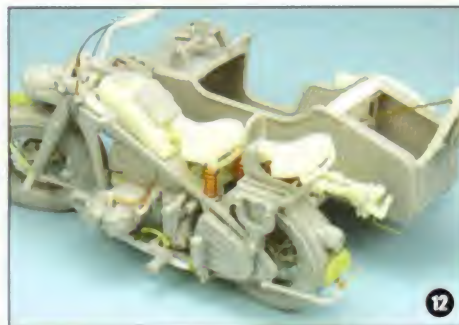
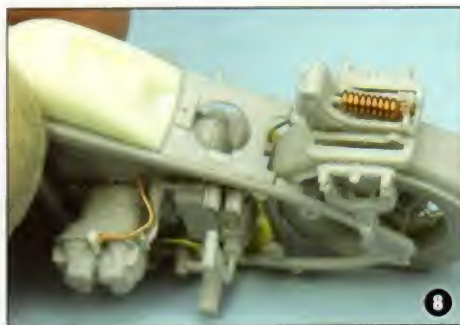
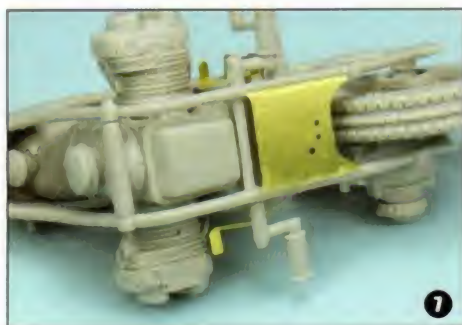
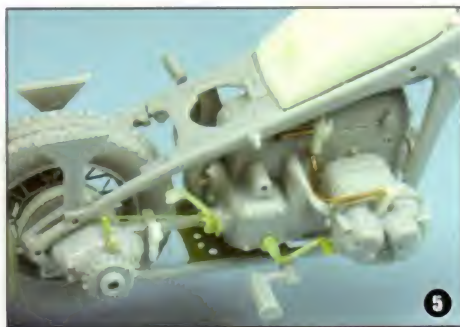
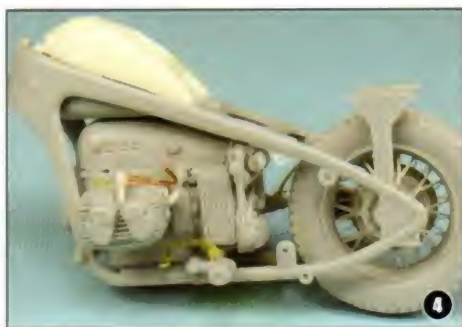


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3





**1.** These pictures give an indication of the amount and quality of parts included in the kit in the Great Wall Hobby kit. **2.** The level of detail throughout the GWH Zundapp is first class, just checkout the embossed writing on the jerry can parts. **3.** The Sovereign 2000 (S2K) update set is excellent, but really is for the more experienced modeler due to large number of microscopic parts. **4.** A close-up shot of the detail on the sidewall of the rear tire. Note also the S2K sparkplug caps and the copper wire HT leads. **5.** S2K even includes a resin fuel tap to mount on the frame beneath the fuel tank. Check out the cool looking photo-etched brass pedal and linkage. **6.** The wheel on the left is the one I messed up! Check out how neat those photo-etched spoke sets look. **7.** This shows exactly where the photo-etch plate fits underneath the frame. Just ignore the tire tread

for now. **8.** Truth be told, I scratch built a new rear seat support before I found the Sovereign one. However, I still like mine. **9, 10.** One completed motorcycle. The addition of the S2K updates and the scratchbuilt detailing turn this into one stunning little model. Dig those control cables made from stretched vinyl sprue... **11.** Even the underside of the sidecar doesn't go unmissed by S2K with the inclusion of clamps and brackets, which are missing from the GWH kit. **12.** It's amazing to think just how detailed this model is considering it is only around three inches in length. **13, 14.** Two styles of trailer are included in the Zundapp kit. **15.** The base coat of Tamiya Dark Yellow is lightened with white for the upper most areas. Only the dark yellow areas are air-brushed. The rest of the model is brush painted.

Panzer Grenadier Division-Grossdeutschland and the 24th Panzer Division.

To add to the many parts in the kit, Sovereign 2000 has produced a detail set comprising 47 pieces cast in a cream resin specifically to enhance this very model. Again, all the parts are nicely rendered, but care will be needed to remove them from the casting plugs (trust me on this).

My references are all from the internet with a really good walk around on Prime Portal, plus a

German based website that supplies spare parts for enthusiasts restoring and maintaining Zundapp and BMW motorcycles.

#### Construction

Starting with the engine block, you have a choice of two cylinder heads. I don't know enough about the engine, so I choose parts A35 and 36. The two plug leads are supplied as photo-etch in the kit. As you would expect, they are a bit on the flat side.

Sovereign supplies resin spark plugs in its update set, so I drill holes in each to accept copper wire for the HT leads. I replace the two short pipes that connect the cylinders to the engine block with stretched sprue—the kit ones are awkward to clean up.

The rest of the engine detail is added and here I use the kit-supplied parts. The Sovereign resin parts are VERY delicate and I manage to destroy many of them trying to remove them from the casting plug. Various wires are added from thin fuse wire.





The wheels are next to be assembled and each one is comprised of seven parts including the photo-etch spokes. Care must be taken, as the instructions don't show how the parts fit together to make the tread pattern. I realize this after gluing the first wheel together and then I had a tire with two large grooves in the middle. Oops! Parts E2 and E4 have a raised area on one side and these should go against the inner face of the outer tire parts (E1 and E5).

The bike frame is tricky to put together. However, I find that gluing part A8 to one side helps to align everything. The engine and rear wheel assemblies can be fitted later as the frame will flex enough to fit them afterwards. I also leave the rear wheel detached from its the hub. This will help with painting later on.

The front forks are impossible to assemble. If you follow the instructions, I guarantee you will be pulling your hair out by the handful. There are only four VERY small attachment points at the top of the forks (excluding the headlight). I start at the bottom by gluing the front wheel and mudguard in place then work my way up. Before I do anything else, I remove the ejector-pin marks from the inside of the mudguard. I replace the grips on the handlebars with the Sovereign items, as the kit parts are rather basic.

The rear mudguard is quite tricky to fix and the only way to make it stay in place is to use a fair amount of cyano glue. Again, I remove the pin marks from the inside before fixing it in place. The rear seat support is somewhat simplified, as there should be a spring underneath—Great Wall just provides a locating peg. Although a new item is in the Sovereign set, I fancy exercising my scratch building skills. I channel out the kit part and make a spring from fuse wire wrapped around a section of brass rod.

Looking at the rear seat on the model and comparing it to pictures, it appears about one millimeter



too high. The assembly should sit on the mudguard. I cut off the upright brackets from the frame, trim the bottom of each side by one millimeter and glue them back on. At this point in the instructions, two stowage boxes are to be mounted on either side of the rear seat. However, if the trailer is to be used, then one of the optional towing brackets needs to be fitted here. The stowage box itself is molded hollow, so I cover the back with styrene sheet.

#### Final details

I add the final details such as cabling from stretched sprue. The sprue I use is from the rubber band tracks found in earlier tank kits. This stuff can stretch for yards and gets very thin and is ideal for cabling. I replace the middle section of exhaust with plastic rod, as the kit item is a bit short. The front seat is added and again I use coiled copper wire for the seat springs as I felt the kit items are over-scale.

The sidecar (or boat) is next up on the bench and the basic shell goes together fairly well, with just a couple of joints to clean up. The rear stowage

compartment can be shown open or closed. However, apart from the lid being a bit chunky, it is also wrong. It should have a curve at the bottom where it hinges further down on the real thing.

I wanted to show the lid open, so first I make a bulkhead from 10-thousands styrene sheet to go behind the seat. A small strip of styrene is then glued across the top of the bulkhead.

Just above the hinge line on the rear of the sidecar a 1.5mm strip is removed from the top. A new lid is made from 10-thousands styrene and detailed with micro strip and styrene rod.

If fitting the Sovereign hook (part 37) the triangular bit for the kit part from the front of the chassis should be removed first.

The further on with the build I went, the more confusion there was with Sovereign's part numbering, especially regarding the trailer components. In fact, there is one part not even numbered, or shown on the parts picture.

The stowage boxes for the sidecar are molded hollow and require back covers, as before. The instructions show the jerry can and a somewhat weedy-looking shovel to be just glued on. On the real machine, a tool clamp for the shovel and fixture for the can would be present.

Joining the sidecar to the motorbike is VERY delicate as the locating areas are small. To reinforce the joint, I drill holes into the bike frame and sidecar cross member then pin it with wire. Doing it this way will make painting easier later on.

There are parts included to make two trailers and these are pretty simple to assemble, the Sovereign set only includes towing bars for the trailer with spoke wheels. The only thing I add to the solid wheeled trailer are a couple of tool clamps for the spare tow bar at the front.





## MMiR RECCE

Great Wall Hobby 1/35 Zundapp KS 750 with Sidecar.  
Kit number L3508.

Sovereign 2000 detail set. S2KA 008. Kit graciously  
supplied by The Airbrush Company at  
[www.airbrushes.com](http://www.airbrushes.com)

### References

<http://www.wehrmachtsgespann.de/>  
<http://www.primeportal.net/home.htm>

### Painting

Usually at this point in the show I give my models a blast with rattle can black primer, but due to the size of the thing it would probably blow it right off the bench. I load the airbrush with Humbrol Black 33 and spend a happy couple of hours spraying the model. As it is enamel paint, I allow it to dry for 24 hours before spraying anything else.

Tamiya XF-60, Dark Yellow is used as a base color, lightened with XF-2, White for upper surfaces (not that there are many).

The engine is painted in Vallejo Oily Steel, tires and seats in dark grey and—that is pretty much it for the painting. Decals are minimal as you would imagine, just the number plates, tire pressure markings and Zundapp logo on the side of the fuel tank and these are bedded down using Johnson's Klear/Future.

### Weathering

MIG Productions Dark Brown Wash is run into

all the corners to bring out the detail, followed by paint chipping using Vallejo German Camo Black/Brown.

MIG's European Earth was flicked around the model and—that was pretty much it for the weathering, too.

### Conclusion


To summarize I have to say Great Wall has produced a really nice kit of a popular modeling subject. After working on some larger armor kits recently it is a shock to do something so small. It is still enjoyable to build but, oh—my eyes!

A lot of the kit is very nicely done but I continue to be surprised to find the rear seat mount was quite basic. Some of the attachment points, especially for the front forks and rear mudguard are so delicate it will leave you scratching your head as to how to fix the damned things in place.

The Sovereign update set is, in my opinion, not that necessary. I used most of the resin set basically

because it is supplied with the review sample. To be honest, the kit parts are pretty good as they are. I found smaller bits such as levers, pedals, etc. difficult to remove from the casting plugs and I end up breaking many of them.

In both the kit and update set, the instructions are vague in areas, with arrows pointing to approximate locations, part numbers mixed up—the usual stuff we have come to expect from cottage industry manufacturers. I do find this aspect of recent kits frustrating and I wish manufacturers would take a bit more care. Better still, get actual model makers to proof read them!

OK, with the few things I have nitpicked (and don't all kits have them?) these can be improved with little effort and decent references. All I ask now is can we have some WW2 Triumphs and Harleys next? 

—Andy King



# Postcard from Italy

## The MTSMA Royal Italian Navy torpedo boat



For years I have wanted to create a diorama of a naval subject. I recently was able to do this due to the introduction of the Italeri Elco PT boat in 1:35 scale. The model worked well for this purpose. The large size of the model made its composition a challenge. The reason that I am attracted to such subjects is that they are totally different from what I usually do.

For my next project I began searching for another naval subject, similar to my first, but with reduced dimensions. The only obstacle to the idea that I proposed is the lack of the represented subject on the market and its related accessories.

Being the head of the Royal Model I have decided to mass produce this most interesting subject and its complementary accessories and I will describe their creation in this article. But first, some history!

### History

Following the production of the first small M.T.S.

(Motoscafo da Turismo Silurate: Torpedo Touring Motorboats) motorboats in the summer of 1940, the Italian Regia Marina (Royal Navy) studied various improvements. This led to the production of the M.T.S.M.A., which was a widened version of the earlier models (Motoscafo da Turismo Silurate Modificato Allargato: Torpedo Touring Motorboats Modified Widened).

The first type had a displacement of 1.75 tons and measured 7.15 x 2.10 x 0.50 meters. A 90 HP gasoline engine provided propulsion. This enabled a maximum speed of 28 knots with a corresponding range of 90 miles. In the modified 1941 version, displacement rose to 3 tons and the dimensions were 8.40 x 2.20 x 0.60 meters. Two gasoline engines provided propulsion in this version with a resulting increase in power to 190 HP and an increase in speed to 32 knots with a corresponding range of 200 miles. The M.T.S.M.A. version underwent further modifications among which was a small cabin for both crew members. This was distin-

guished from the preceding version, which had two separate compartments.

### The model

I spent many hours researching and building the master pattern of the M.T.M.S.A and I can personally verify its accuracy. Although I know that this article is partially for the promotion of my company, I hope the reader will realize that this statement is made with sincerity.

The kit is composed of resin and photo-etch parts. With its few, large resin parts, it is a fairly easy kit to build and can be completed in just a few hours (photos 1-4). I felt the best way to render the thin canopy of the cabin was as a large photo-etched part (photos 5-7). This will require a little attention during the assembly of the kit. Beyond this, the most complicated area is the cockpit. This contains the transmission housing, seats, control levels, steering wheels and control panel (photo 8).

I build the larger assemblies first and then work my way to the smaller details. I do this in order to





minimize the chances of breaking delicate parts. There are dozens of small wing nuts that are used to secure the rear deck and its associated panels. These are the very last parts to be added (**photo 3**).

The canopy was left unattached from the model to aid in painting the cockpit. The window glazing must also be added after painting (**photo 10**).

The M.T.M.S.A is sprayed overall Tamiya XF-20, Medium Grey (the instructions also indicate an alternative, Humbrol Matt Light Grey, 64). Below the waterline, these boats were painted either dark blue or black. I chose black, in this case Tamiya XF-1. Shadows are created using black with a touch of XF-64, Red Brown.

Small details were painted with Humbrol enamels, including the twin screws, which were painted with Humbrol Brass, 54.

Once the paint was thoroughly dry, the model receives an oil wash to unify all the tones. A light dry brushing with light grey enamel paint followed this.

Using an oil mixture of white spirit and enamel color, I simulate spots of oil and gasoline on the rear

portion of the boat. Because the M.T.M.S.A is mostly constructed of wood, scratches, chips and spots of rust have been focused essentially on specific details, such as the cleats, or the latches of the motor inspection hatches (**photos 11-15**).

#### The wharf

For some time now, I have collected photographs of docks and wharfs. Using those photos, I developed a design that was typical of an older European wharf, but also one that had some visual interest. Integrating stairs, railings and multiple levels, accomplishes this. In order to create the wharf, I first built the structure in wood. This is covered with self-hardening modeling compound, then sculpted and textured with various tools (**photo 16**).

The painting is carried out with Tamiya acrylics sprayed with an airbrush to create the necessary broad chromatic variations. Several individual cobblestones on the upper surface were hand painted a lighter shade to add interest (**photo 17**). Once dry, the surfaces are further enhanced with oil washes

and pigments. Special attention is paid to the large cast iron stanchion. Rust effects are added to the stanchion and its base with rust streaks extending onto the stones. Similar effects are added to the metal railings (**photo 18**).

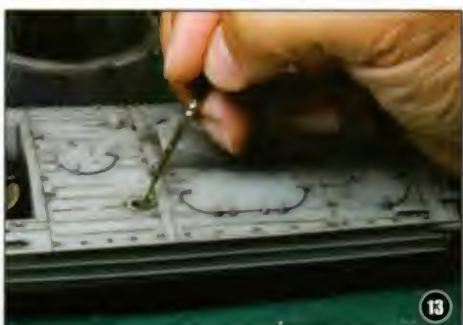
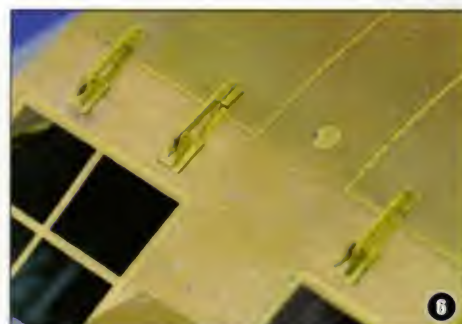
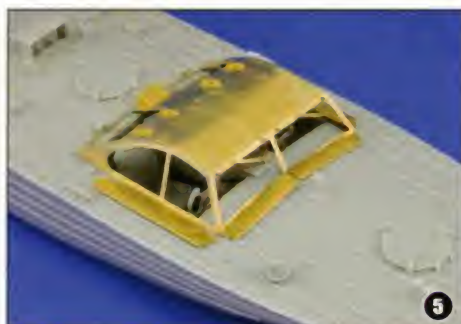
In keeping with the theme of refueling, I add several Italian pattern fuel drums. These are also weathered with oils and pigments, again emphasizing rust effects due to their proximity to the water.

Wherever the field drums are located, I add spilt fuel effects using various black and brown enamel paints mixed with white spirits.

#### Water effects

Water, as it often happens in this type of diorama, plays a large role. There are many ways to carry out this effect and every modeler can find the technique that works best for him. I have tried many methods to solve this problem with some disastrous results. In the end I have found that transparent resin provides the best result. This material allows the creation of translucent effects, such as catching





a glimpse the submerged propulsion system.

To visualize the composition, I move the unpainted model and wharf around on my workbench until I am satisfied with the arrangement (**photo 19**). I then create a wooden frame for the diorama that will encompass my scene. In order to

enhance the clear effects of the resin, I create a platform for the wharf. Tracing the outline of the wharf on a piece of plywood approximately one centimeter thick makes this platform. This will provide more depth for the resin (**photos 20-22**).

Once this is complete, I base-coat the area to

receive the resin with Tamiya XF-61, Dark Green (**photos 23, 24**). I then use an airbrush to create the various color tones to simulate the chromatic difference of reflected water (**photo 25**).

Once I decided the final position of the boat, I begin pouring the resin. The material is tinted using three shades of Humbrol enamel (**photo 26**). In order to avoid excessive heat from the curing resin,





I apply several layers (photos 27, 28).

If left alone, the resin will dry with a totally smooth surface that is somewhat unrealistic.

In order

before the resin is completely cured can eliminate this.

### The figures

The figures, perhaps, represent the essence of this diorama because they impart to it life and spirit.

In this case, they will reveal a moment of harbor life that can be seen in several photos of this time period.

The subjects that I used are included in Royal Model range and are of a generic theme for dioramas that can be adapted to different situations and theaters. Due to their basic work uniform,

to impart movement to the surface, during the application of the final few layers, a plastic round handled paintbrush is pressed into the resin to create a rippled effect.

The only problem with this product is that it has a tendency to curve upwards where it meets another surface. Pressing these areas down with a clean tool







29



30



31



32



it is a simple matter to paint them to meet my requirements. In this case, it is blue in order to represent the uniform of the harbor staff of the Italian Navy.

All the figures have been used as they are provided in the package, with the exception of the fellow leaning on the prow of the M.T.S.M.A. His right hand was slightly modified to meet the prow with carefully heating and bending.

Once the figures are mounted and any voids are filled with putty, I move on to painting. For this phase I essentially follow four steps. The first is undercoating the figures in various colors of Tamiya acrylics using a brush. Once the undercoat is dry, I apply various washes of black, brown and blue to the different areas. I then remove any excess color and using both oils and enamels, I emphasize any folds

in the clothing. Once everything is dry, the figures are sealed with Humbrol clear sprayed with an airbrush (photos 29-32).

#### Conclusion

That is my scene. I hope you have enjoyed view-

ing its creation as much as I did creating it. I am now searching for my next naval subject. Perhaps, next time I will again choose a large subject!

—Roberto Reale

## MMiR RECCE

Royal Model products used in this diorama: 586, M.T.S.M.A.; 594, Wharf Section; 623, Italian Oil Drums; 580, Men Refueling and 590, Mechanics.

#### References

*The Regia Marina's MAS Boats, 1915-1945* by T. Garth Connelly and Rear Admiral Mauricio Ertre, Nimble Books, 2011. ISBN: 1608881024. The book describes every MAS boat built and operated by the Italian Navy during the First World War, the inter-war years and the Second World War.







# A PEEK AT WHAT'S NEW ON THE FIGURE FRONT



## AC Models

Let's start things out with someone we haven't covered before. AC Models is a New Zealand company that makes a variety of busts and full figures. **16004, US Marine, Pacific WW2 (1)**, is the first example of their work that we were able to get our paws on.

This is a rather stylized portrayal of a Devil Dog from the tortuous Pacific island-hopping campaign of WW2. His portraiture, uniform dungarees and equipment all portray the rigors of war effectively. The SCR-300 radio in the foreground dates him from mid-1943 on as it was first issued in March 1943. It had a 2 1/2 to 5 mile range, depending on the antenna and was used by artillery forward observers and for the infantry battalion net. The figure itself scaled out about 1/2 inch shorter than the 1:16 scale Alpine guy we'll look at next. If you are interested in AC Models and what they have to offer, give Andrew Cairns (the head honcho) a shout at [amcairns@paradise.net.nz](mailto:amcairns@paradise.net.nz)

## Alpine

We're not really sure how Alpine keeps doing this. **16009, German Infantry Officer (2)** basically pulls down our pants and humiliates us. This is just five inches of pure bad guy badass. You know, kinda like Darth Vader in flared trousers. Let's move on before the whole damn box of Kleenex gets used up, because we are simply weeping with joy. Oh wait, there's an alternative head with a steel helmet on too. Sniffle.

The fun doesn't stop there for Alpine. We still have the little guys to cover.

**35102, WW2 Italian AFV Crew (3)** is in a classic Alpine pose: indicating something with the full hand, not just pointing. There is nice attention to detail here with the Italian black leather crash helmet and armor crew jacket. The M1874/89 three pocket bandoleer and holster for the elderly and rather uncommon Glisenti 1889 revolver are very nice touches. The alternate head comes with the distinctive Italian Bustina cap.

**35103 German DAK Fallschirmjäger (4)** looks to be in a pensive mood. Perhaps he needs new targets for his MP40? The uniform and equipment details are nicely rendered here, with everything from the M37 parachutist helmet to the Luftwaffe tropical trousers with that distinctive left thigh pocket. The alternate head for this guy has a Luftwaffe overseas cap with a spiffy set of dust goggles. 34014, "A Conversation in the Desert" features both of the above together in one box. We guess the Fallschirmjäger understands Italian.

Last but not least is a pair of ammo loading SS dudes.

**35105, WSS Panther Crew #1 (5)** is just strolling around all casual like with a live round on his shoulder because it makes him feel macho. He wears the Panzerjacket and reversible padded winter trousers. Head choice is between the M43 cap and the overseas cap for this one. **35106,**

**WSS Panther Crew #2 (6)** wears the full reversible padded winter getup. Head choice is the overseas cap or the fur lined hat that was copied from the Russians. Get the pair in one box by shopping for 35107, WSS Panther Crew Set

## Battalion

It's an interesting turn of events that Battalion has released two GIs from WWII. They have done a pretty nice job with these two figures, too. **35020, The American Infantryman WWII (7)** is all business as he leads the way with his Thompson M1A1. His uniform is classic GI that is seen in widespread use from 1941 up until late 1944 with the M41 field jacket, woolen trousers and M1938 leggings. The German stick grenade thrust into his belt is a nice little detail. The casting quality on this figure was



good except for a large bubble that voided the left heel. **35022, The Sergeant 82 Airborne Division 1945 (8)** strikes a bit more sedate pose. He provides an interesting contrast to the previous figure as he wears the full M43 uniform. This uniform was issued as a replacement for the distinctive M1942 parachute jumper's uniform seen in Normandy and earlier for a number of reasons right around the time of the Arnhem operation. The first and foremost reason was for standardization with the rest of the U.S. Army. There was also some criticism over the lack of warmth and conspicuous color with the earlier parachute jumpers' uniform. Some nice touches on this figure are the captured German map case and the Thompson ammo bag on the right rear hip. This figure was very nicely done with just a few tiny air bubbles to fill. Good job, Battalion.

## Bravo 6

Three more editions of USMC fury from Bravo 6 grace our pages proving once again that no one portrays the 'Nam like these guys. **35029 USMC (3) Machine Gun Team Tet '68 (9)** is a two-man set with one guy cutting loose with his "pig" while the other feeds him ammo.

**35030, USMC (4) "Blooper" Tet '68 (10)** features an African-American Marine holding on to his cover as he runs for anew position. The portraiture on this figure is great.

**35031, USMC (5) "Sharpshooter" Tet '68 (11)** takes a bead with his M-14 on a priority target. As usual, all of the uniform and detail on these figures is spot on. A lot of attention is paid to small details, such as drapery and personal effects that make each addition to this lineup unique. Casting quality overall is very good. Be careful with some of the smaller parts as they are rather delicate.

## Doug's Original

We're glad to see this company back in action. Douglas Lee always seems to have a good mix of ideas up his sleeve. The figures that seem to have a more standard theme are useful fill a variety of roles while some of his others add a dramatic flair to any scene.

For instance **35026, British Tanker N/W Europe (12)** and **35027, British Bren Gun Carrier Crew (13)** both wear the standard British Serge Battle dress uniform and that make them really handy to crew out your vehicles in sunny weather.

**35028, Angry Woman (14)** is a shining example of what we mean when we say dramatic. You could have this crazy mad woman chasing just about anything. Picture the entire Italian Army in full retreat across the desert with her on their heels.

**35029, SS Machine Gunner (15)** is another very useful figure in a classic pose. The M43 feldbluse, trousers, and short boots with gaiters date him from mid-1943 on.

## Dragon

Dragon continues to lead the styrene pack when it comes to molding quality and attention to detail. **6656, Advance to Kharkov 1942 (16)** is a four-figure set that portrays a Luftwaffe mook showing with three Wehrmacht grunts the fresh hole in his helmet. The







FIGARO, FIGARO,  
FIGARO, FIGARO,  
FIGARO, FIGARO!



Wehrmacht guys seem to be looking on skeptically. The Luftwaffe figure is probably part of an anti-aircraft gun crew as he wears an anti-aircraft badge. The Wehrmacht guys all wear M36 uniforms and could be used for any setting from Poland to Russia until mid-1943. As usual, Gen2 gear is included which means lots of extras. We liked the way that Dragon embraced the unified theme idea with all four figures engaged in the same activity.

## Hobby Fan

**HF598, US M5A1 Tank Infantry "Pick Up" (17)** is a really cool set that features four GIs mounted on a hunk of stowage that are tailor-made to throw on the back deck of any one of AFV Club's M5 Stuart kits. These dogfaces look to be from that later part of the Northwest Europe campaign. The sculptor did a bang-up job of mixing and matching various uniform articles. The guy on the back that you can't see so well carries an M1 carbine and a .45 pistol and wears the M43 jacket with woolen trousers and M38 leggings. The BAR Gunner wears the enlisted man's woolen overcoat and the combat service shoes introduced in late 1943. The M1 Garand

carrying soldier has on the reversible ski parka, M43 trousers and combat service shoes.

At the far right, the Thompson carrying GI wears the M43 jacket and trousers along with M38 leggings.

The figures are completely separate from the stowage chunk so this set is pretty flexible.

**HF599, German 15cm Artillery Crew (II) Winter (18)** gives us two more crew for your Kraut artillery. Last time we saw the ammo humpers (HF591). This time we get a duo to be positioned closer to the gun with one crewman about to pull the lanyard and the other protecting his hearing. This pair of figures has the padded reversible winter uniform introduced to the Wehrmacht and the SS in the winter of 1942. These figures are



WHAT THE  
HOLE IS THAT  
SMALL PITY

23

23





This figure comes with two heads to choose from, either the overseas cap pictured here or the crushed officer's cap. We liked the thumbs up pose as it illustrates the positive, happy go lucky image that the SS was so famous for. There was a slight mold mismatch around the ankles, but other than that this little fella is tip-top. The resin was easy to work with on this one and reminded us of the material Alpine uses.

If you are in the mood for a dramatic, larger scale display figure **WC90/14 German Sniper WWII (25)** fits the bill very nicely. On the box cover the reversible, padded winter uniform is shown as the Stumpfmeister or marsh pattern, but you could do splinter pattern if you feel like it. Come to think of it, if you change the belt buckle insignia slightly, this dude could be SS too. He is armed with a Gewehr 43 semiautomatic rifle. The rooftop with chimney is included. There were some large carrier blocks to remove, but this figure is definitely an attention getter. If you have a hard time finding these figures, shoot an e-mail to paul@minially.com

### Resicast

These two Tommies are the second half of the tank rider series sculpted by Peter Morton that we started looking at last issue. **35.5606, Tank Rider with Rifle No.2 (26)** is the mustachioed chap holding the Lee-Enfield Mk.1 No.4. **35.5607, Tank Rider with Sten (27)** is probably a Corporal and therefore the commander of this rifle section. A late war infantry section in the British Army was made up of 10 men: the section commander, six riflemen and a Bren gunner with two assistants. Like the Resicast figures from MMIR 53, these two are late war European Theater types that wear the British Serge Battle Dress with the Model 1937 webbing and Mk. II helmet. Our advice is to buy them all and pile 'em on your Churchill or M4A4 as they add more character than spare tracks or sandbags ever will. The quality is everything you have come to expect from Resicast, in other words excellent.

### Royal

No one does Mini Men of an Italian persuasion quite like Royal. This time around they have taken a subject straight out of today's headlines with **609, Italian Alpine Soldier (8th Reg, Brg. Julia) Afghanistan 2008/9 (28)**. This figure is made up of just three pieces: a separate head, right arm, rifle and the body. From reference photos found on the web, the uniform and equipment details check out pretty well. His armament is the Beretta SC70/90 5.56mm assault rifle. You can paint up the uniform in either the Italian woodland or distinctive "vegetata" pattern as both have been seen in Afghanistan. To find out more, Google the word Alpini.

While we are on the modern Italian theme, check out **629, Modern Italian Tank Crew (No.2) (29)**. These three half figures are perfect for filling the hatches of your Ariete or Centauro. The goatee on the commander figure makes him look particularly fearsome. All of the heads are separate, so you can swap them around if you like. The trio is dressed for cooler climes in black leather jackets designed by Armani (No joke!). Very nice photo-etch mikes are included. Both of these figures sets measure up to Royal's usual high standards as far as sculpting and casting quality. It was also a nice plus that they were so simple to assemble.

### Stalingrad

We've been talking about these guys in Short Takes for a couple of issues. We finally got a hold of a sample of their work. **3532, German Infantryman at Rest 1939-44**



CAN YOU GUYS  
KEEP IT DOWN,  
PLEASE?

30

THE WAY YOU'RE  
HOLDING THAT  
RIFLE IS REALLY  
PISSING ME OFF

BITE ME!

(30) is a wonderful piece of 1:35 scale sculpture. Overall casting quality and attention to detail is very high as we have come to expect from resin figures made in Russia and the Ukraine. He wears a full load typical German infantry gear issued before 1943, with the M36 field jacket (pleated pockets!) and the infamous jackboots. He comes with a KAR 98K and a steel helmet (not pictured) with the liner molded in so you can show it sunny side up. This figure scaled out well with others from styrene and resin manufacturers that we have looked at.

## Tank

We love Tank from Russia now and probably always will. They kinda got the ball rolling for all the Russian resin little dudes flooding the market. Machine gun teams seem to be a fetish with these guys. We dig it. **35112-Soviet Machine Gunners with Degtyarev MG Stalingrad Summer 1942 (31)** is a great little duo that is perfect for any early Russian front setting where the snow isn't three feet deep. The early war blouse is characterized by a lack of epaulettes, which did not show up until 1943. The Degtyarev (DP) machine gun fired a 7.62mm round and had a characteristic drum magazine. The weapon was robust, cheap, and easy to produce. An ironic piece of trivia is that the bipod on the real thing is just as delicate as the one in this figure kit, so be careful with both. The gunner's bandaged head is a nice touch. The quality of this set is typical of Tank with bubbles here and there and some fragile parts. Drapery effects, anatomy and attention to detail are superb.

## Toro

More modern Polish soldiers in resin are now available from Toro.

**35F29, 10th Armoured Cavalry Brigade NCO in Summer Dress (32)** is a nice option to jazz up your Polish Leopard 2A4 with. Both Echelon and Toro provide marking sets to make a Polish Leo, so this is a very viable project. This is the nicest figure we've looked at so far from Toro. He was simple to put together and casting quality was very good.

**35F32 Soldier With Machine Gun (33)** is an infantry-type badass from the Polish contingent to the International Security Assistance Force in Afghanistan. He wields a Soviet-era PKM 7.62mm general-purpose machine gun introduced in the 1960's. We thought that this figure was pretty cool but you might want to replace the head. Two very nice features for both figures is the little foldout full-color painting guide and the insignia decal sheets. The Toro figures scale out a little larger than some of the other 1:35 scale figures, but who the heck else makes modern Poles anyway, huh?

## Zvezda

Zvezda has decided to cash in on something that everyone wants with **3614, German Tank Crew 1943-45. (34)** You get five figures, which is the magic number for any late war Panzer crew. These guys are just hanging out... probably waiting for a pizza delivery.

They are depicted on the box in a variety of SS camouflage uniforms. We liked Rudolf the pipe smoker the best in this set. All of these guys come laid out like the figures from other styrene companies with separate heads, arms, legs, torso, headgear and accessories. They scale out well in comparison to Dragon, Mini Art, and Master Box, too.

Both these factors make this set ideal conversion fodder, if you so desire.

All Mini-Men samples are submitted by the manufacturers and for that, we are extremely thankful.

I AM RUSSIA, PEE  
MACHINE GUNNER

"BUCKLE" IS NOT  
SPELLED WITH AN "H"



# MINI-PAKWAGEN

*Converting Tamiya's diminutive 1:48 Sd.Kfz 251/1 Ausf. D into the potent Sd.Kfz 251/22 mittlere Schützenpanzerwagen (7.5cm Pak40)*



**I**n the last couple of years, we have seen a steady stream of new 1:48 kits from Tamiya. While there have been other 1:48 scale kits from AFV Club, Fine Molds, Hobby Boss, etc., plus a whole host of resin makers, as of today the bandwagon is predominantly made up of these Tamiya kits. The reasons for this new direction are fairly well known to us now, with the desire of Mr. Tamiya-san to match the extremely popular 1:48 aircraft scale with new armor kits, especially in the hopes of creating the perfect diorama scale. But for well-known reasons—such as the oft-heard “I already have over 500 1:35 kits in my stash and I don’t want to duplicate them with a smaller scale”—quarter-scale has not really taken hold with the traditional 1:35 crowd (or the 1:72 crowd for that matter), like many had hoped it would. That’s a bit of a shame, because in my opinion the kits offer the best of both worlds: on the one hand they have 90 percent of the fine detail that the larger 1:35 scale kits enjoy,

including the ever-important aftermarket for photo-etch, tracks and barrels, and on the other hand they save shelf space just like the smaller 1:72 scale kits.

This holds true for the 251 series in particular since it is a half-track and by nature smaller than the regular gun tanks. I’ve never built a 251 before, so the kit is even smaller than I was expecting but after handling the sprues I must give Tamiya some credit. They have done a wonderful job of maintaining the balance between size, detail and accuracy. This kit is really a gem and should appeal to more modelers and fans of WW2 German armor. In fact, in an effort to further promote this new kit and the scale in general, there was an online group build based on this kit, popularized by its common name “Hanomag.” You can check it out for yourself on the

1:48 forum of the Missing Links website ([www.missing-lynx.com](http://www.missing-lynx.com)). I thought this “Hanomania Group Build” was the perfect excuse to have the Editor send me this kit to build, and naturally he wasted no time in shipping it to me.

#### **Gaso.line ups the ante**

Because the 251 series is such a popular subject amongst the fellas, it was not long before the aftermarket reacted to the release of this kit. Originally, I wasn’t too thrilled with the prospect of building the standard personnel carrier variant, but I changed my mind when I heard the announcement of a resin SdKfz 251/22 Pakwagen conversion from French maker Gaso.line. You know how we can be with the big gun versions! I immediately ordered my set and waited patiently for it to reach my workbench.

In the meantime, I prepare the plastic bits as much as I can until the resin arrives. The first thing





1. The conversion begins with the addition of the new resin floor.  
 2. The resin support pieces are too wide, causing them to bend inwards when mounted. This problem is easily corrected by making new parts from styrene, using the resin parts as a template. This improves both fit and detail. 3. A view from the front side shows the extra angle stock added to the bulkheads for strength. The rest of the resin stowage bins fit nicely thereafter.  
 4. The gun, assembled and ready for test fitting. The gun is quite easy to build. It captures the look of the weapon faithfully, albeit somewhat simplified. Note that the barrel can be raised and lowered in its trunnion housing. 5. The gun, resting in its new mount. I take advantage of the new parts to lower the mount slightly, which better captures the low-slung look of this vehicle.





6. With the gun mount rebuilt and sitting properly in its place, I add the upper hull armor next, which fits well. Here you can see how nicely the two hulls dry-fit together. There are hardly any visible gaps. 7. After removing the upper hull again, I feel that the gun is still a touch too high, so I sand the base to fit lower onto the mount. 8. This photo is a little deceiving because the track assembly and the front wheels are not yet glued on, but I want to check their fit to ensure that everything looks before painting begins. I have also added the dashboard and rear bench seat. Note that I leave off the steering wheel so that I'll have an easier time painting this section, too. Scratch building the new support mount ends up being pretty easy, and improves the fit and detail levels of the conversion.

9. A great way to work with link and length tracks is to build them as a whole unit and not glue them to the hull. In this way, you can then easily slide them off of the suspension arms and paint them separately from the rest of the model.

for me to do is clean up all of the road wheels and glue the road wheel stations (molded separately) to the lower hull. This kit does not use the die-cast metal scale weight chassis of Tamiya's other 1:48 tank kits, so there is no need for any superglue just yet. Some of the road wheels are molded slightly off-center—this is barely noticeable, but they do require a few quick swipes with my sanding stick to correct. For the tracks, I use the same trick that I used with the 1:35 Hetzer build (see Issue 42/43): build up the road wheels and tracks into their own single subassemblies, but don't glue the wheels to the suspension arms. This way I can easily slide the tracks and wheels off as a single unit for easier painting. The hardest part of this process is imparting the right amount of track sag in a natural looking fashion. I try to create a smooth arch across the top run, but it is a little tricky in this size.

I spend the rest of the time cleaning up the hull parts and dry-fitting everything to ensure proper alignment when it comes time for final assembly. I can't help myself though—I just have to have some fun and add serious damage to the front fenders. I go so far as to remove most of the right-hand one altogether. To make it look believable I add tiny empty tool brackets with styrene strip and fill in the tool mount holes as well.

One minor criticism of the kit is that the tracks lack any detail on their inner face, plus they require filling of many dreaded ejector pin marks. Considering that the spare track links include all the missing inner detail and lack pin marks altogether (using a sprue mount system similar to Dragon's), I am a bit disappointed that the main tracks are not molded in the same fashion. There are, however,

lovely resin tracks available from WWII Productions if you are inclined to go that route. They will also inherently give the proper sagged look too. Fortunately, the overlapping road wheels end up hiding the majority of the inner surfaces.

#### The gun arrives, but all is not well

After a short two weeks I receive my overseas parcel from France. Inside, I find the new 7.5cm PaK gun, new upper armor plate, and the associated mount for the hull. I inspect the resin parts for flaws and find no casting errors of note. The barrel, which is cast in white metal, is clean and straight. I notice that the casting pore plugs are well thought out and look easy to remove, with only the muzzle brake requiring any effort to clean up. The box also contains a new sub-floor remastered from the corresponding plastic kit part that incorporates the minor stowage changes dictated by the addition of the gun. On my reference shelf I have little in the way of dedicated 251 books other than the old Squadron In Action book. This, coupled with the fact that the 251/22 was a very rare performer, means that I am not able to confirm the resin set's accuracy. This is probably just as well, but I must confess that the parts have a simplified feeling to them. This is borne out by inspecting similar 1:35 scale models of the 251/22 built by other trusted modelers. From this admittedly limited research, it does seem that the main angle support arms are not quite right.

The gun mount itself, while not really a platform, is molded integrally with the two angled steel support arms and the two half-width frontal support bulkheads. Overall it looks nice enough, but when I

try to fit the parts, there is something wrong with the width between the two angled support arms. Their respective locating points on the floor create some tension, causing them both to bend inwards. Clearly this bending action is not intentional. I try figure out why this is, but the best I can discern is that the overall mount width is molded incorrectly. The only real solution is to scratch build new supports from styrene while cutting the mount down the center, thinning it for a better fit. I also discover (and this may not be 100 percent accurate) that these arms are actually steel channels and not solid stock material as molded in this kit. So with that in mind, I use Evergreen 1/8" styrene channel strips that I cut to size using the resin parts as a guide. I carefully remove the gun mount from the resin casting and glue it to the new support arms. This has the added benefit of allowing me to lower the gun down a tad to better match the drawing in the Squadron book.

I also decide to replicate the two bulkheads to improve the kit's soft bolt-head details, again using the resin parts as a template. Well, another benefit of working in this smaller scale is that this minor rebuild goes very quickly. In a few hours time I have a rebuilt gun mount that solves the fit problem nicely. Now I can glue the new mount assembly into the interior of the lower hull.

For the top part of the hull, some minor surgery is required to fit the new upper armor piece. Using a razor saw, I carefully remove the kit's frontal armor plate and replace it with the new resin part. The fit is pretty good along the hood edge and hull sides, but slightly worse along the top edges. These required some sanding and filling to get a decent fit, but overall it goes pretty smoothly.



Now I can turn my attention to the gun assembly itself. This sequence also builds up nicely, and while I'm not a 7.5cm PaK expert, the general appearance matches most reference photos well enough. In keeping with the spirit of this scale, I really feel good enough is good enough. However, if I were backed into a corner, I would say there are a couple of areas that have some room for improvement. The barrel and muzzle really need to be replaced with turned metal parts, especially since a company like RB Productions can make a perfect one that is pretty inexpensive. The armored shields should be in two separate photo-etch parts, which a company like Hauler could make easily enough. These changes would really make this conversion sing. But like I said, I am just having some fun with this kit and not getting too hung up with being 100 percent accurate. I've added enough extra effort so far to make the model look good as is, so I decide to get started painting the interior so I can add the upper hull half to the model.

### Painting commences

Before I can begin painting the interior I need to decide on the exterior color, because they are one and the same for open-top combat vehicles. Choices, choices... Do I go with the fashionable over-all Olivegrün, or the more standard Dunkelgelb? Luckily I manage to get my hands on a very useful color photo from the older Sturm & Drang title on the SdKfz 250/251 halftracks. I have the Internet to thank for that one because initially all I had on hand was the more common black and white version. After I posted my photo online, a friend sent me the corresponding color version of the very same photo (Thanks again, Andrew!). The vehicle in the image has a fantastic rusted patina to the finish and I know for sure that that's the look I want to replicate.

The 251/22 in the photo is in overall Dunkelgelb. But before I start spraying the interior, I want to impart a well-used look to it. What better way to do this than to use the hairspray technique—again! So, I paint the interior red primer with Vallejo 982 Calvary Brown from the Model Color line. To prevent the paint from bleeding, I seal it with a thin layer of satin varnish and then give the interior a coat of hairspray. Next, I mix up some Dunkelgelb from a 70-30 mixture of Tamiya XF-60 Dark Yellow and XF-55 Deck Tan. I thin it down 50 percent with water to make the chipping easier to control. (I've found that thinning Tamiya acrylics with lacquer thinner gives them a very strong adhesion when used for an opaque finish such as this, making it difficult to chip properly.) Once all this is dry, I go ahead and chip the interior, and then finish up by individually painting the seat cushions and driver controls and adding the dashboard decal to the instrument panel. I then give all the joints and the floor some suitable dark washes and dust-colored pigments for an overall impression of wear and tear. Nothing too extreme, but I do want to convey a fair amount of use.

With the interior now complete, I turn my attention back to the assembly process. I fix the front suspension unit and lower steering arm per the instructions and glue together the front wheels, but hold off mounting them so they will be easier to paint. At this point, I can close the two hulls together and finish the assembly. Affixing the two large storage panniers to each side sponson is the final step. Before I can begin painting the exterior, I first need to thoroughly mask off the interior to protect it. For this I use Tamiya's excellent yellow tape. I trim the open edges with the tape and then fill the larger opening with damp tissue paper.



**10.** Open-top vehicles always require painting in two main stages: interior and exterior. The interior must be finished first so that the hull can be closed up. It is extremely important when painting multi-media projects to prime the model beforehand. My favorite primer is Gunze Sangyo Mr. Surfacer 1200, which goes on smooth and dries to a very tight finish. It is also completely matte, and so creates an ideal surface for painting. **11.** The fighting compartment should appear well used to reflect the desperate fighting that occurred in the last few months of the war. To get this look, I paint the first layer in red primer using Vallejo's Model Color 982 Cavalry Brown, and then seal it with a satin varnish coat to prevent any bleeding into subsequent paint layers (I learned this the hard way from my Heuschrecke project in issue 48). **12.** The next step is to paint the base Dunkelgelb. I use a 70-30 mixture of Tamiya XF-60 Dark Yellow and XF-55 Deck Tan, with a drop of

XF-2 Yellow. I thin this mixture almost 50 percent with water, and gently cover the interior surfaces in thin layers. I want to build up the color slowly so as not create too thick of a paint layer, which would make chipping a lot more difficult. For the chips, I first wet the surface with water using short stiff brushes, wait a moment to let that work its way down to the hairspray, and then start to gently scrub. I am going for controlled chips in logical areas, so I try to avoid any large flakes. The goal is a myriad of small nicks and scrapes that would naturally occur from having a gun crew constantly crammed in there, loading and unloading ammo. Once that step is complete, I paint the seat cushion and back rests with a medium brown color and dry brushed their edges with a light rust color to give them the look of textile materials. Blending in some orange oil paint enhances this effect.





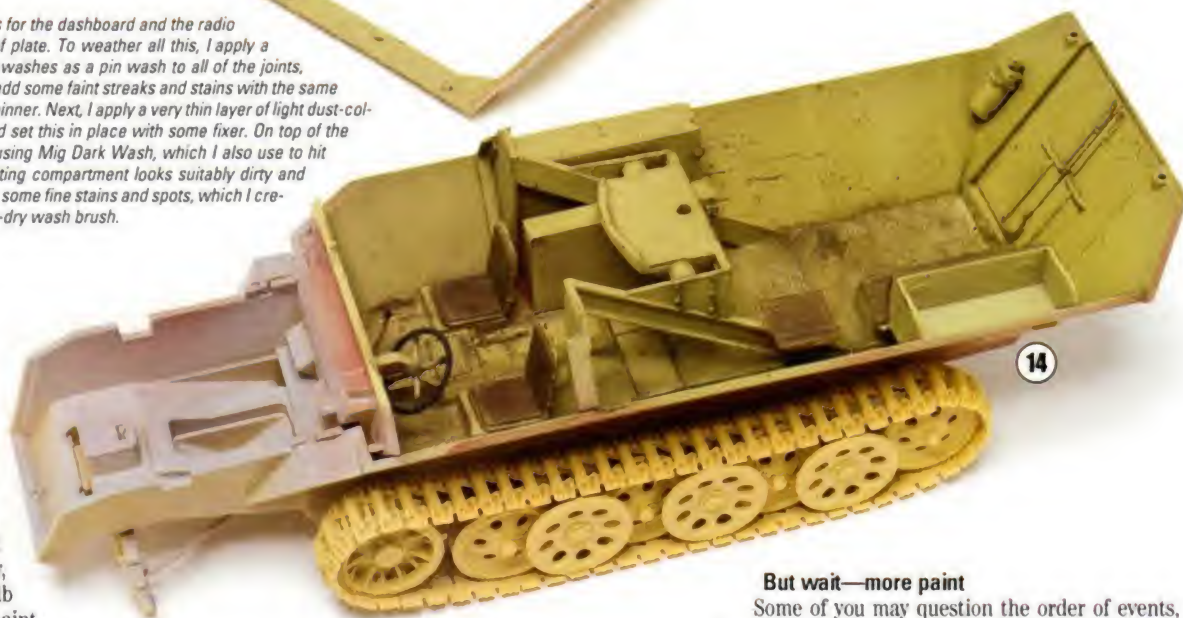
13

**13 and 14.** I can now add the decals for the dashboard and the radio panel mounted under the front roof plate. To weather all this, I apply a mixture of Mig Brown and Neutral washes as a pin wash to all of the joints, corners, and molded details. I also add some faint streaks and stains with the same mix and clean up any excess with thinner. Next, I apply a very thin layer of light dust-colored pigments to the floor plate and set this in place with some fixer. On top of the pigments I apply additional stains using Mig Dark Wash, which I also use to hit the main panel lines. Now the fighting compartment looks suitably dirty and well used. The last things to add are some fine stains and spots, which I create by flicking the end of the nearly-dry wash brush.

## And the painting continues

Now that the model is ready for its paint job, I feel it best to follow the same procedure that I used for the interior. This meant red primer first, then hairspray, and then the same Dunkelgelb base coat. I add some light paint fading by blending in some white to the base coat and applying it randomly to the upper surfaces. I don't bother covering the lower chassis and undercarriage, leaving them exposed in the red primer. The gun gets treated to the same paint at the same time, but I change the barrel color to dark gray before adding the hairspray to replicate the primer used on gun barrels. The last addition is to spray some very faint patches of faded green for a touch more visual interest. The markings are Eduard's "Small German Number" vinyl masks. Since my reference photo has no crosses, I don't bother with any.

Next is the all-important chipping stage. This is especially critical for this project because I want to replicate the extreme chipping visible in the color reference photo, but to an even greater degree. This is that I decided to use Tamiya paints thinned with water—Lifecolor and Vallejo acrylics tend to flake in large chunks, which I definitely want to avoid. The process is straightforward and is similar to what I've described in previous articles. Using tap water and some short brushes, I work over a small section at a time, carefully moving the chipping brush in a sideways motion to recreate the marks I see in my photo. I also make good use of the metal Tamiya Paint Stir Stick, which is sharp enough to scratch perfectly, but not so sharp that it cuts the red primer underneath. From there, it is just a matter of carefully working my way around the model until I



14

achieve the look I'm after.

With the model thoroughly beat up and looking worse for wear, I go back over some of the larger marks with a custom Lifecolor dark brown steel color and a #2 fine tip brush. I apply this color to center of the larger chips, leaving some red primer visible around the edges. Control is the name of the game here, and the Optivisor is my top draft pick for staying within the lines.

## Weathering now commences

Next, I put the airbrush away and break out the washes. I first apply a pin wash to all joints and panel lines using a 50-50 mixture of Mig P221 Brown and P222 Neutral washes. Any excess gets either cleaned up or dragged down to create faded streaks. This stage goes very quickly thanks to the small surfaces, so I move right to the pigment stage.

To get a dusty appearance, I use some light-colored pigments and brush them on dry to the lower chassis area and underneath along the bottom of the hull, then use Tamiya Thinner to fix them in place. I finish this step up by adding a battery of stains and wet areas utilizing the latest goodies from Mig Productions, including P410 Oil and Grease Stain Mixture and P409 Wet Effects. The goal is to give this area some texture and visual interest without resorting to a heavier mud application.

## But wait—more paint

Some of you may question the order of events, but I actually paint the track and wheel assemblies at this juncture even though it means getting my airbrush dirty all over again. At least I can partly justify this by the fact that the Dunkelgelb color I use for this stage is a little different!

Anyway, to begin I spray the tracks with a light rusty tan color and then add some texture with darker rust and brown tones, using a small piece of sponge. Next, I hand paint the rubber pads with a dark gray color followed by—believe it or not—a layer of hairspray, which in this case is an easy way to mask the tracks. Now I paint the wheel areas with red primer on both sides, and then rub the overspray off the tracks with water just like I did the chipping process, only this time I remove it all. I repeat the hairspray on the front of the wheels, and cover this up with a very light tan color for a faded Dunkelgelb impression. Next, I gently chip the wheels and remove any yellow overspray from the tracks. I complete the assemblies by hand painting the rubber tires dark gray and adding some pin washes around all of the hub and bolt details. The two front wheels get pretty much the same treatment, the only exception being that I dry brush the fresh worn rubber with Tamiya XF-69 NATO Black.

## OK, back to the weathering

With the track and wheel assemblies complete, I mount them permanently to the model. My next order of business is to impart a faded and rusty look. For this, I switch to my trusty 502 Abteilung oil





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paints, making a small cardboard palette with a complete selection of light tans and yellows, medium and rust-colored browns, and some darker umber colors for maximum discoloration throughout the next steps.

As usual, I work in small sections at a time applying various oils in a controlled manner, carefully blending them and adding streaks as I go along. The real trick to this step is to keep the clean blending brush just barely wet with thinner. Otherwise, the entire process will turn into a wash—literally. It is also important to keep a clean paper towel right next to the palette at all times to blot off the thinner after cleaning the brush (which happens quite often). My goal is to impart a faintly rusty look to the major chipping areas to capture the feeling of my photo reference. This process is slow and tedious, but it makes a huge difference in the final appearance of the model.

By the way, please don't think that omitting any mention of the gun on purpose. In truth, I have the gun sitting in its mount the whole time, and I treat it along with the rest of the hull as I go along.

### Wrapping things up

By now the model is almost complete. The last few areas I attend to are the front spare track armor and some small items for the interior like old tools, a couple of spare road wheels, and some empty shell casings. The brass shells (also from Gasoline) are treated to a quick soak in Blacken-It to give them a dark, gray-brown color. The other items are painted individually in much the same way that I painted the rest of the model.

I give the spare tracks a more rusty appearance than the main track runs, and glue them to the front of the nose. To give the impression they are tied to the model, I carefully add some very fine brass wire rod that I annealed beforehand.

If you look closely at the in-progress photos, you can see the two tie-down cleats mounted on either side of the nose. Despite appearance, these don't magically appear out of nowhere. I didn't realize that these were missing until I need to fit the spare tracks, so I replicate them from tiny styrene strips, carefully glue them on the hull, and then paint them in place.

The metal tool heads get touch of rust and are then haphazardly placed inside to impart a feeling of abandonment. The same goes for the spare road wheels; I use a rustier wash for them as well. I also add a rusty bucket hanging off the rear tow pintle. I

15 and 16. The exterior painting follows the same process as the interior. Primer, red primer, a seal with satin varnish, two even layers of hairspray, and finally the Dunkelgelb base coat using Tamiya paints thinned with water. 17. For a touch more color, I also add some very faint spots of light green. 18. The next part is probably the most critical of the entire build. If I screw this up, then the whole project is lost (or at least takes an entirely new direction). I want to match as closely as possible the chipping pattern visible on the vehicle in my reference photo. To that end, I start out by wetting one section at a time and then carefully work my way around the model. I use the two brushes pictured below and the Tamiya Stir Stick to recreate the various chips and scratches, being careful to move the tools from side to side in a linear motion. This motion is key to get the long side scratches I am trying to replicate.

Before



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After



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spend a little extra time thinning it down, adding a new wire handle, and giving it its own multi-layered, hairspray-chipped paint finish.

The final bit of work is to add some splashes of white paint to the right side of the nose, the end of the gun barrel, and the edge of the right front wheel. This marks the abandoned vehicle as a roadside hazard warning for night driving—I really like how Adam Wilder did this on his Jagdtiger in Issue 45 and decide it is the last detail that I need. For the same reason, I also add the hand-painted white inventory number on the hull sides.

I really enjoyed this project and it was exciting to learn a few things about 251's. I think that Tamiya would be remiss if it did not produce more variants of this excellent little kit. Yes, it has some very minor issues, but nothing that some extra effort can't quickly solve. It would also be very cool to see this kit in plastic—plus, we'd get a new 1:48 scale 7.5cm PaK gun. Seems like it would be right up Tamiya's alley! Let's keep our fingers crossed that it happens sooner rather than later.

—Mike Rinaldi





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19. The larger chips and scratches are all treated to one more layer of color to replicate exposed metal. For this, I use a custom steel paint mix and a fine tip brush. 20. A combination of Mig Filters is applied next to tone everything down and tie in the colors a little better. 21. I follow this up with some pin washes to bring out the fine details of the model. The first wash is a mixture of Brown and Neutral Washes. The second, which is applied to the main details, is Dark Wash. 22. A light dust layer is all that is required for the pigment stage. I brush these on dry and fix them in place with Tamiya thinner. On top of that, I add a plethora of stains and streaks with various Mig Productions weathering products. 23 and 24. Now I paint the track assemblies. I paint the tracks and rubber pads, add a hairspray layer for a mask, and then spray the wheels with red primer. The hairspray allows me to easily remove any overspray on the tracks. The front sides are then given another hairspray layer, followed by a coat of Dunkelgelb and some gentle chipping. The front wheels are treated in a similar fashion to recreate the fine scratches. The rubber tire is first painted a medium gray, then dry brushed with Tamiya NATO Black. 25. Here is the model after all of those steps. The tracks and wheels are now permanently fixed to the model. I finish the weathering by switching to oil paints. Note the faint traces of whitewash that are still visible.





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26. The next major weathering process is to enhance the finish with oil paints. I find it best to create a complete palette of colors that complement the model's paint job. I use 14 different oils placed onto a piece of cardboard, which helps absorb the linseed oil. This trick facilitates blending, and also makes the paint dry much faster and to a completely matte finish. The colors include white, light yellows and tans, orange and rust tones, plus some dark browns and grays. I apply the colors in small amounts exactly where I want them to go (as opposed to a tiny

collection of random dots), and then carefully blend them in with thinner. The trick is to have just the right amount of thinner on the brush—too much, and it will turn into a wash. When the oils are used in this manner they stay workable for about 48 hours. 27. To add some clutter to the model, I paint the spare road wheels and tracks and add a heavily weathered bucket, as well as a couple of old tools and some empty shell casings. 28 and 29. The left side of the hull is now done. Compared to the previous in-progress photos, the paint now has a lot more patina to it. In general, I probably spend the largest single amount of time in the oil paint stage. In fact, I basically repaint the entire surface with oils, and the color changes from the beginning until now are the direct result.



## MMiR RECCE

### Recce

1:48 Tamiya Sd.Kfz 251/1 Ausf. D Kit number 32564. Suggested retail price \$24.95. (Available online for around \$18)

1:48 Gasoline Sd.Kfz 251/22 7.5cm Pak40 Conv. Kit number GAS48082. Suggested retail price \$18. (Available from [www.quarter-kit.com](http://www.quarter-kit.com))

1:48 Gasoline 7.5cm Pak40 brass ammo Kit number GAS48P09. Suggested retail price \$6. (Available from [www.quarter-kit.com](http://www.quarter-kit.com))

### References

Sd.Kfz 251 in Action - Armor Series No.21 by Charles Klimt. Squadron Signal Publications, 1981. ISBN 0-89747-124-5



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